



**SPAWAR**  
**Systems Center**  
**San Diego**

TECHNICAL DOCUMENT 3118

January 2001

## **Accomplishment Report for Fiscal Year 2000**

**SSC San Diego C4I Programs Office Philadelphia**

Approved for public release;  
distribution is unlimited.

SSC San Diego

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TECHNICAL DOCUMENT 3118  
January 2001

# **Accomplishment Report for Fiscal Year 2000**

**SSC San Diego C<sup>4</sup>I Programs Office Philadelphia**

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distribution is unlimited.



**SSC San Diego  
San Diego, CA 92152-5001**

**SSC SAN DIEGO**  
**San Diego, California 92152-5001**

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**E. L. Valdes, CAPT, USN**  
**Commanding Officer**

**R. C. Kolb**  
**Executive Director**

**ADMINISTRATIVE INFORMATION**

The work described in this report was performed for the Naval Air Systems Command, the Naval Sea Systems Command, and the National Imagery & Mapping Agency by the SSC San Diego C<sup>4</sup>I Programs Office Philadelphia.

Released under authroity of  
F. R. Wahler  
Director of C<sup>4</sup>I Systems, Philadelphia

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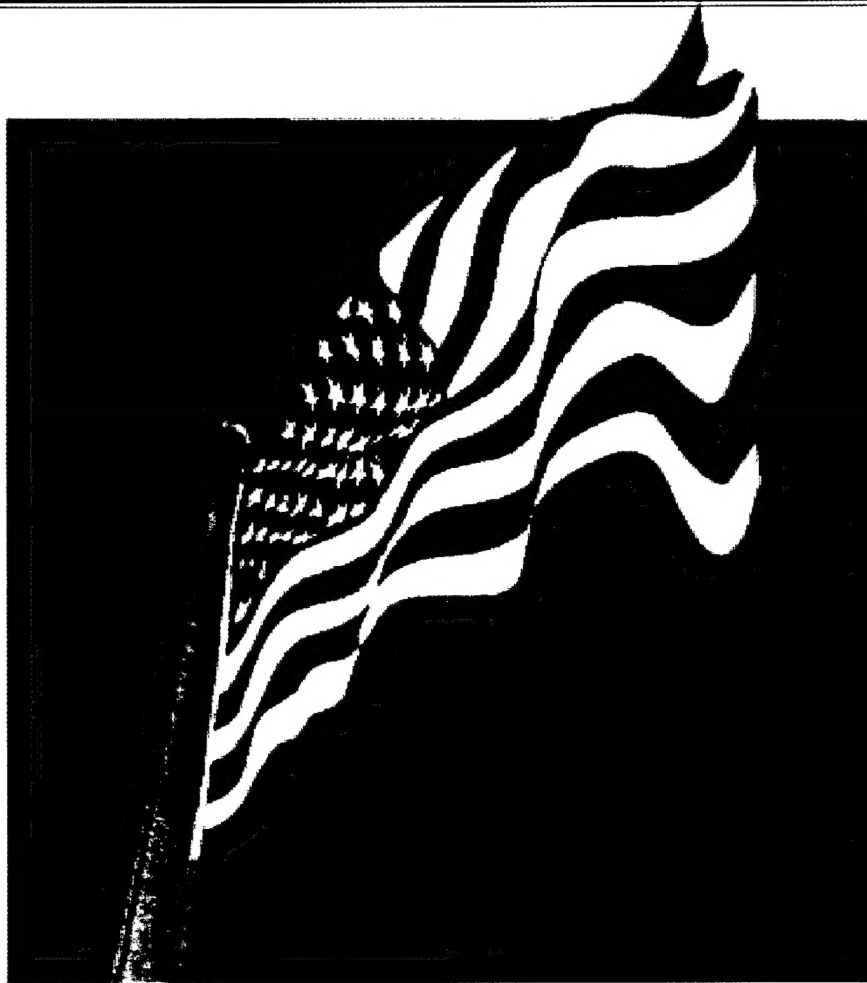
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**CUSTOMER**  
**SATISFACTION**  
**Is OUR ONLY**  
**PRODUCT.**

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## INTRODUCTION

Space and Naval Warfare Systems Center (SSC) San Diego C<sup>4</sup>I Programs Office Philadelphia, formerly designated the SPAWARSYSCEN San Diego Detachment Philadelphia, was established in November 1998 as an integral unit of SSC San Diego Command and Intelligence Systems Division (Code D42). For a map of the location, see Figure 1, Philadelphia Area, and see Figure 2, Naval Support Activity (NSA) Philadelphia Buildings, for a diagram of the facilities.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia is responsible for a program of development, in-service engineering, procurement, installation support, configuration control and integrated logistics support for mission planning systems, electronic photographic processing systems, and imagery archiving systems afloat and ashore worldwide. During fiscal year 2000 (FY00), SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided technical support to:

- ◆ Commander, Naval Air Systems Command
  - ❖ Program Executive Officer, Strike Weapons and Unmanned Aviation (PEO(W))
    - ◆ Command and Control Systems Program Office (PMA-281)
  - ❖ Program Executive Officer, Tactical Aircraft Programs Office (PEO-T)
    - ◆ Tactical Aircraft Mission Planning System Program Office (PMA-233)
    - ◆ F-14 Program Office (PMA-241)
- ◆ Naval Electronic Logistics Office (NELO)
- ◆ Commander, Naval Sea Systems Command
  - ❖ Aircraft Carrier Program Office (PMS-312)
  - ❖ Amphibious Warfare Program Office (PMS-377)
- ◆ National Imagery and Mapping Agency (NIMA)
- ◆ Joint, service, and allied commands and program offices.

Directed by a civilian manager, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia has a staff of sixty-five civil service employees with various disciplines and skills, including multi-disciplinary engineers, computer specialists, electronics and engineering technicians, logisticians, and management support personnel. Customer satisfaction based upon Total Quality Management (TQM) and the Quality Process is SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's principal goal and criterion of achievement. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's efforts are supplemented by one hundred and seventy-four contractor engineering and technical support personnel.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's internal structure is depicted in its Organizational Chart, Figure 3. Principles of Operation, Figure 4, graphically illustrates SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's commitment to customer satisfaction.



**SSC San Diego  
C<sup>4</sup>I Programs Office  
Philadelphia**

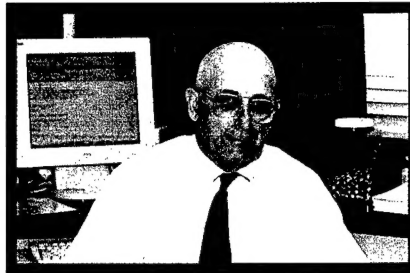


**Francis D. Donaghy**

**Head, Administrative  
Support Office**

Deputy: Barbara Wiley  
Bruce Heath  
Mary Ann Grookett  
Peggy Marlett

Rhea Feldman  
Wayne Lombardo  
Eileen Nikander



**Fred Wahler  
Manager**



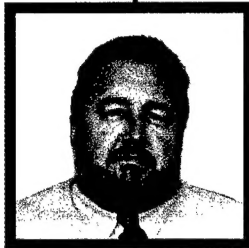
**Betty Kriegel  
Administrative  
Assistant**



**Dennis Rozanski  
Head**

**Cruise Missile Command  
& Control Systems  
Support Office**

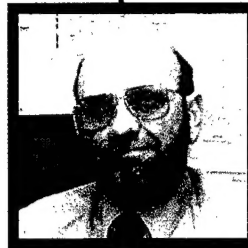
Deputy: Bill Nork  
Dennis Alexander  
Jim Barnes  
Kenneth Chung  
Mark Cunningham  
Frank Davies  
Joe Di Pardo  
Jim Engelke  
Allan Gaidis  
Steve Hoshowsky  
John Kitano  
Jim Kitts  
Dean Krall  
Stephen Kubicki  
Ted Morrison  
Bohdan Sobkiw  
Jim Steib  
Ed Zantek



**Steve Fox  
Head**

**Naval Mission  
Planning Systems  
Support Office**

Deputy: Karen Levine  
Timothy Boyce  
Fran Brown  
Edward Dolecki  
Craig Doster  
J.C. Fitzgerald  
Bob Grant  
Judy Jolly  
Dennis Klinger  
Christopher LaBohne  
Paul Meisinger  
Beth Ann Miles  
Nhan Nguyen  
Kevin O'Malley  
Dave Salmon  
John Sheplock  
Michael Slough  
Paul Steinbacher  
Chuck Storicks  
Mary Williams



**Tim Urbanski  
Head  
Imagery Support  
Office**

Deputy: Dennis Lloyd  
Anthony Brancato  
Eddie Smith  
Charles Soule



**Vivian Di Cristofaro  
Head  
National Imagery &  
Mapping Agency  
Support Office**

Deputy: Frank Greco  
Joel Cohen  
Lou Di Girolamo  
Peter Di Pasquale  
Mike Finlay  
Robert Flipse  
Robert Mullen  
Robert Overholt  
Norbert Reis

**Figure 3.  
Organizational Chart**

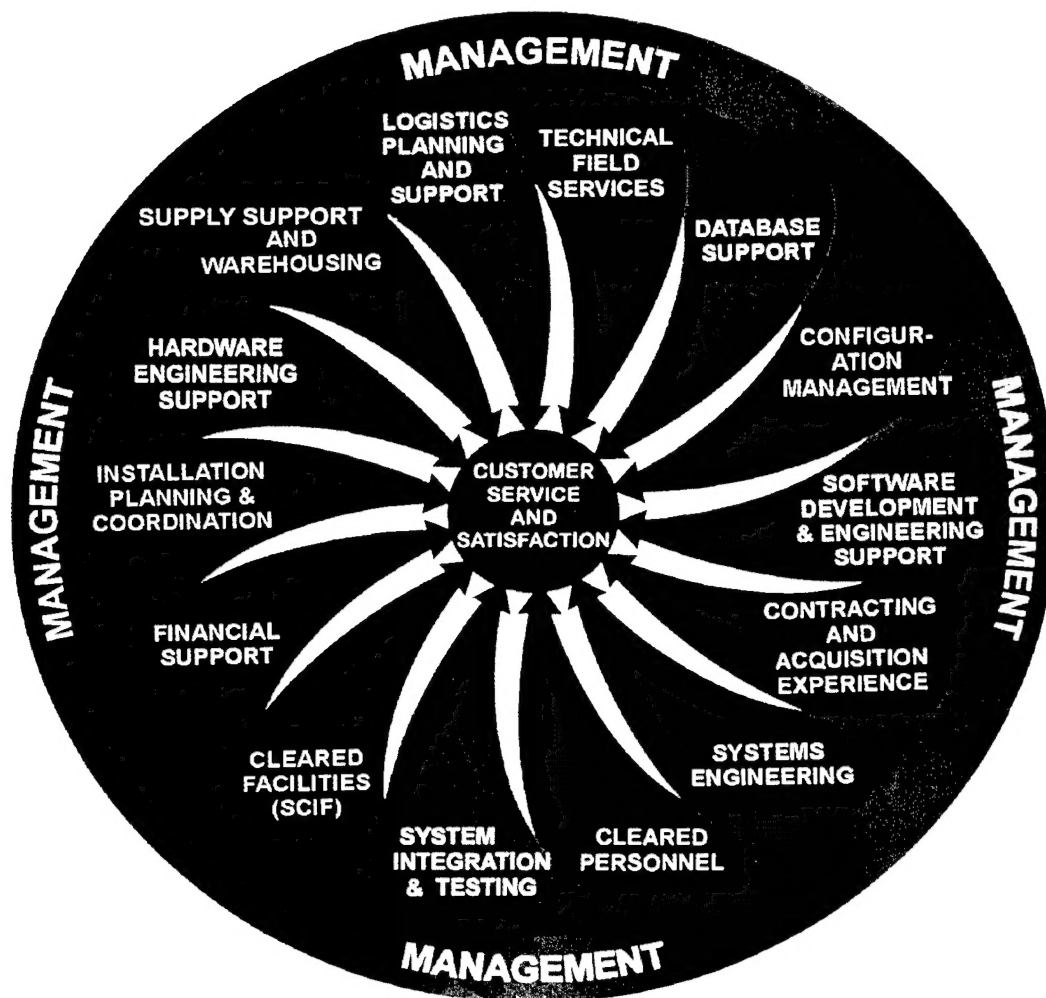
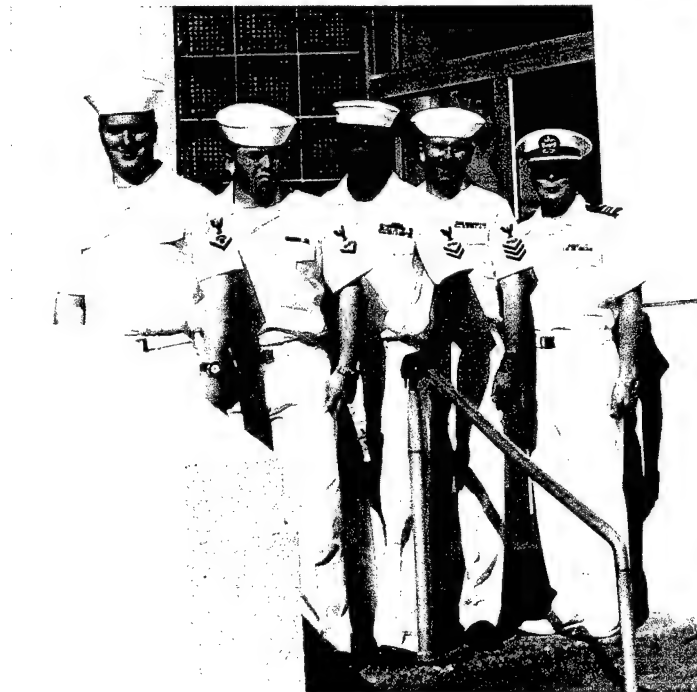


Figure 4. Principles of Operation  
for SSC San Diego  
C4I Programs Office  
Philadelphia

## VISITS

*The Naval Reserve Air System Command provided reservists from NRNASC 0109 Saint Louis, Missouri, Unit 15 for warehouse support to the NavMPS Support Office.*

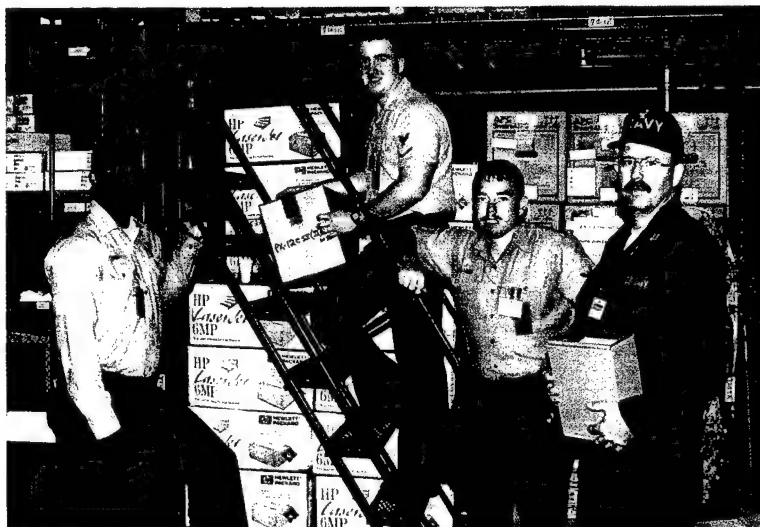
*The reservists are from left to right: AS2 Mallet, AK2 O'Conner, AE3 Harris, and LCDR West.*



*The Naval Reserve Air System Command provided Reservists from NRNASC 0109 Saint Louis, Missouri, for warehouse and office support to the NavMPS Support Office.*

*The reservists are from left to right: IC3 Joel Kaffenberger, AT3 Doug Neumaber, AME2 Paul Dixon, AK1 Jeff Gates, and LCDR David Farley.*

*Reservists working in the warehouse are as follows, from left to right: AME2 Paul Dixon, IC3 Joel Kaffenberger, AT3 Doug Neumaber, and AK1 Jeff Gates.*



## AWARDS AND RECOGNITION



*Vivian Di Cristofaro receives her Navy Meritorious Civilian Service Award from Dr. R. Jaffee, Head, Command & Intelligence Systems Division, and Fred Wahler, Manager, SSC San Diego C4I Programs Office.*



*Steve Fox receives his Navy Meritorious Civilian Service Award from Oreta Stinson, PMA-233, as Captain Maslowsky, U.S.N., OPNAV 062, Jim Cleer, PMA-233, and Fred Wahler observe.*



## AWARDS AND RECOGNITION



*Vivian Di Cristofaro receives a Certificate of Special Congressional Recognition for earning the Navy Meritorious Civilian Service Award and her Navy Meritorious Civilian Service Medal from Fred Wahler.*



*Barbara Wiley is congratulated on receiving her Exemplary Achievement Award for superior support to the Project Support Offices within the SSC San Diego C<sup>4</sup>I Programs Office Philadelphia by Fred Wahler.*

## AWARDS AND RECOGNITION

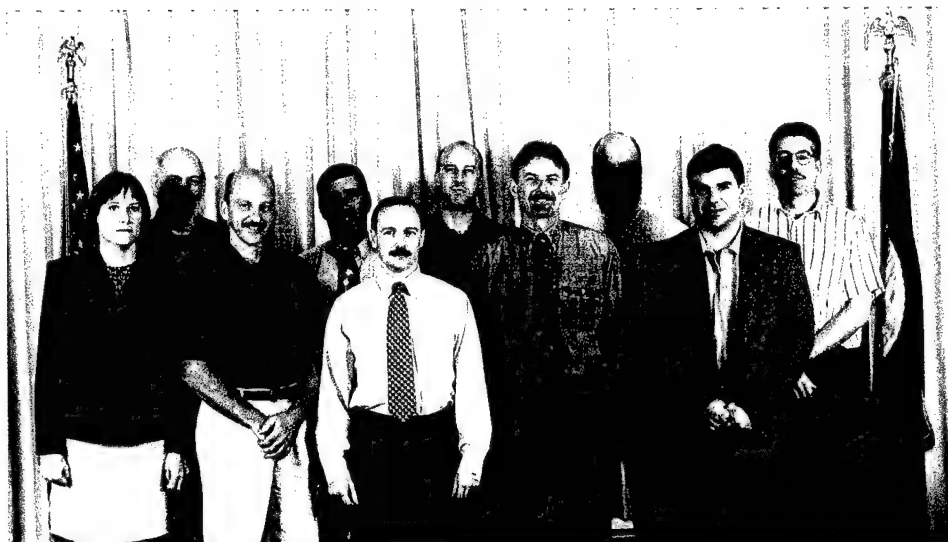


*Fred Wahler presents the SSC San Diego Command and Control Department Code D40 Distinguished Achievement in Business Development Award to Vivian Di Cristofaro.*



*Fred Wahler presents the SSC San Diego Command and Control Department Code D40 Distinguished Achievement in Project Accomplishment Award to Robert Mullen as Vivian Di Cristofaro observes.*

## AWARDS AND RECOGNITION



*The NIMA Support Office received the SSC San Diego Command and Control Department Distinguished Achievement Team Award. Team members from left to right are Eileen Nikander, Bob Flipse, Lou Di Girolamo, Robert Overholt, Robert Mullen, Mike Finlay, Norbert Reis, Pete Di Pasquale, Frank Greco, and Joel Cohen. Not shown is Vivian DiCristofaro, Head.*



*Fleet and Industrial Supply Center (FISC) Team members, Randy Aldridge, Christine McKinney, Deborah Beale, and David Henry, receive a Letter of Appreciation from Captain Moebius, PMA-233, Commander Downs, FISC Officer-in-Charge, and Oreta Stinson.*

## AWARDS AND RECOGNITION



*Fred Wahler presents a Letter of Appreciation to J. C. Fitzgerald from Captain Pritulsky, U.S.N., for outstanding support and training to the French E-2C TAMPs Program.*



*Fred Wahler presents a Letter of Appreciation to Mary Williams, Nhan Nguyen, and Karen Levine from Rear Admiral J. A. Cook, U.S.N., and Lieutenant General L. F. Keene, USAF, for outstanding teamwork and superb accomplishments as Steve Fox observes.*

## AWARDS AND RECOGNITION



*NavMPS Support Office Team members from left to right are Karen Levine, Deputy, Paul Steinbacher, John Sheplock, Dave Salmon, Fran Brown, Barb Wiley, Chuck Storicks, Beth Ann Miles, Christopher LaBohne, Rhea Feldman, Steve Fox, Head, and Paul Meisinger. Captain Moebius and Jim Cleer, PMA-233, observe as Oreta Stinson presents a Letter of Appreciation to the Y2K Team for outstanding performance and professionalism in service to NavMPS. Not shown is Judy Jolly.*



*NavMPS Support Office Team members from left to right are Karen Levine, Deputy, Edward Dolecki, J. C. Fitzgerald, Nhan Nguyen, Timothy Boyce, Michael Slough, Bob Grant, Steve Fox, Head, and Craig Doster. Captain Moebius and Jim Cleer observe as Oreta Stinson presents a Letter of Appreciation to the Y2K Team for outstanding performance and professionalism in service to NavMPS.*

## AWARDS AND RECOGNITION

### Career Service Awards



*Paul Steinbacher receives his 35 year Career Service Award from Fred Wahler.*

*Francis D. Donaghy receives his 30 year Career Service Award from Captain Ernest L. Valdes, U. S. N., Commanding Officer, SSC San Diego, and Dr. R. C. Kolb, Executive Director, SSC San Diego.*



*Rhea Feldman receives her 30 year Career Service Award from Captain Ernest L. Valdes, U. S. N., Commanding Officer, and Dr. R. C. Kolb.*

## AWARDS AND RECOGNITION

### Career Service Awards

*Vivian Di Cristofaro receives her 25 year Career Service Award from Fred Wahler as Dr. R. Jaffee observes.*



*Pete Di Pasquale receives his 25 year Career Service Award from Fred Wahler as Dr. R. Jaffee observes.*

*Anthony Brancato receives his 25 year Career Service Award from Fred Wahler.*



## AWARDS AND RECOGNITION

### Career Service Awards



*Judy Jolly receives her 25 year Career Service Award from Fred Wahler.*

*Ted Morrison receives his 25 year Career Service Award from Fred Wahler.*



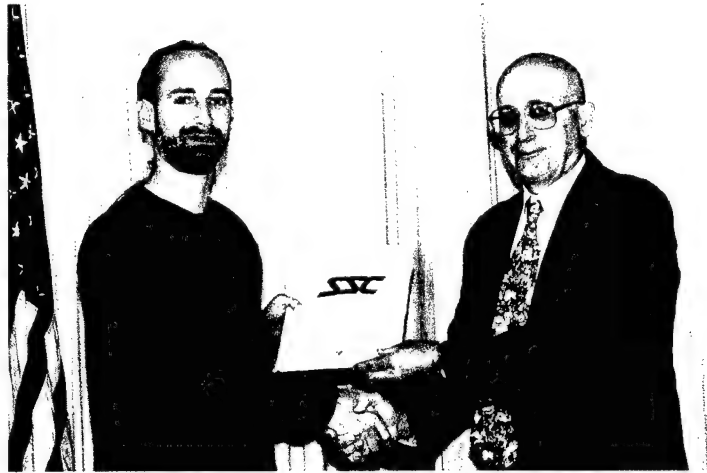
*Wayne Lombardo receives his 20 year Career Service Award from Fred Wahler as Dr. R. Jaffee observes.*



## AWARDS AND RECOGNITION

### Career Service Awards

*Charles Soule receives his 20 year Career Service Award from Fred Wahler.*

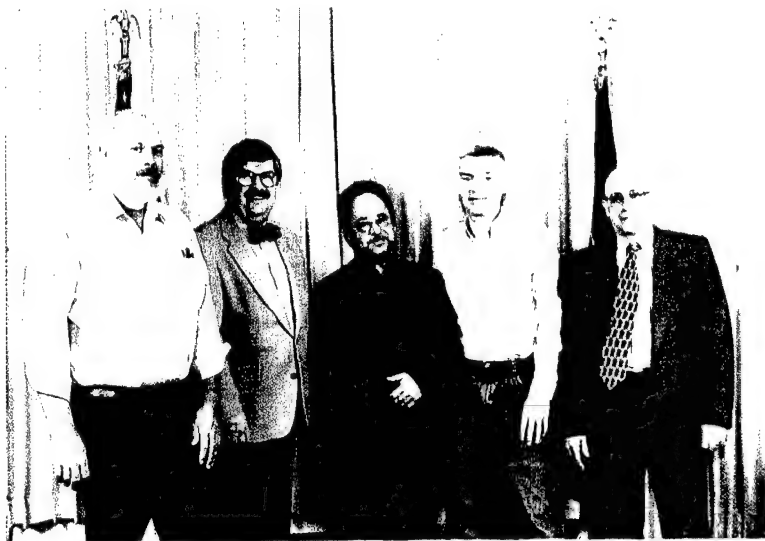


*Michael Slough receives his 10 year Career Service Award from Fred Wahler as Dr. R. Jaffee observes.*

*Fred Wahler and Steve Fox congratulate Karen Levine on receiving her diploma from Cabrini College. She graduated magna cum laude with a Bachelor of Arts degree in Organizational Management.*



## AWARDS AND RECOGNITION



*Y2K Team members, Bob Flipse, Francis D. Donaghy, Wayne Lombardo, and James Barnes receive their Bravo Zulu Service Awards from Fred Wahler.*

*Dennis Lloyd and Charles Soule receive their Bravo Zulu Service Awards from Fred Wahler as Tim Urbanski observes.*



*Joel Cohen receives his Bravo Zulu Service Award from Fred Wahler and Vivian DiCristofaro.*

## BRING OUR CHILDREN TO WORK DAY

On April 27, 2000, the Naval Support Activity, Philadelphia hosted "Bring Our Children to Work Day." Ranging in age from nine through fourteen, twenty-five children accompanied their parents or guardians to experience the realities of the work world and gain insight on how various careers contribute to the workforce. The children sat with their parents at the parent's workstation to observe daily job activities.



From left to right:

David Heath, Meagan Kalberer, Timothy Kriegel, Maria Cohen, Karen Wiley, Laura Nikander, Kimberly Cohen, Nicole Giberson, Jennifer Harris, Katie Cohen, Courtney Greco, Sara Egan, Allison Traenkner, Patrick Giberson, Raymond Costello, Meagan Sambuca, Zachary Feldman, Keith Wagner, Kenny Rodgers, Pamela Cristalli, Kelsey Shields, Joey Cristalli, Shannon Barnes, Brittany Shields, and Samantha Wagner.

SSC SD C<sup>4</sup>I Programs Office Philadelphia manager, Fred Wahler distributes prizes for the teams who completed the C<sup>4</sup>I Programs Office information scavenger hunt.



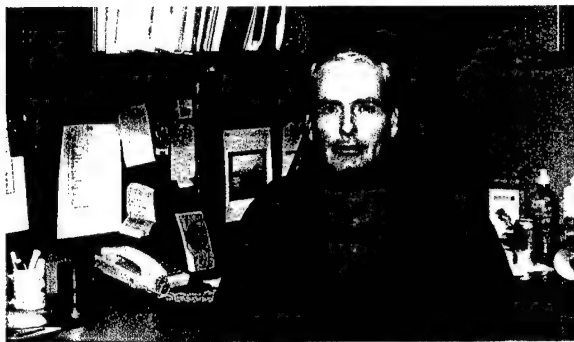
## ADMINISTRATIVE SUPPORT OFFICE



*Francis D. Donaghy, Head,  
Administrative Support Office*



*Barbara Wiley, Deputy  
and Program Analyst*



*Bruce Heath, Security Officer*



*Wayne Lombardo, Facilities and Safety*



*Mary Ann Grookett, Security Assistant*



*Rhea Feldman, Acquisition Specialist*



*Eileen Nikander, Acquisition Specialist*



*Peggy Marlett, Program Assistant*

## ADMINISTRATIVE AND ACQUISITION SUPPORT

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's Total Obligating Authority (TOA) was \$61.9 million in FY00. Nearly three-quarters of these funds were from Navy sources, whereas, DoD and other joint services' funds comprised the remainder. Acquisition of materials and services totaled \$57.1 million. The total number of purchase requisitions increased by ten percent. Credit card transactions were level. However, the total value of purchases under the program increased, partly as a response to an expanded purchasing authority limit granted to two experienced members of the support staff acquisition team.

Travel and outgoing message traffic in response to client support requirements or inquiries remained at a high level as supported systems increased. Y2K planning and execution was accomplished with no disruption to ongoing support efforts. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia received re-accreditation for its technical support computer systems, SIPRNET access and connection, and laboratory open-storage.

Warehouse operations were improved with the installation of enhanced lighting and data/voice communications systems, acquisition of additional materials handling and occupational safety equipment, and construction of security cages for the storage of high value materials. Receiving and shipping facilities were reconfigured and improved. FedEx bills of lading were up slightly from the previous year. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia processed 2,145 shipping documents (DD1149).

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's administrative workload is catalogued in the table below.

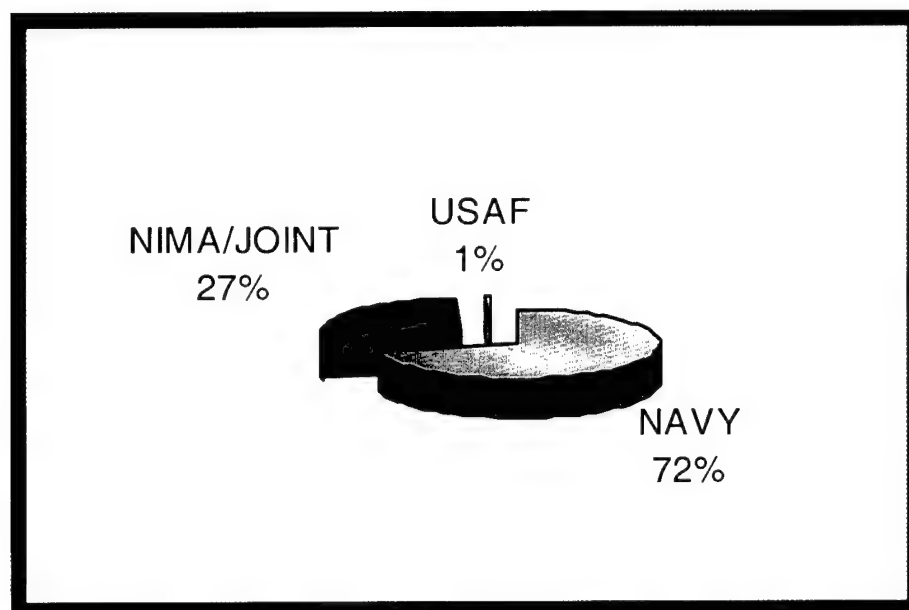
**Table 1. Administrative Workload FY00**

Purchase requisitions	432
Requisition stubs	3376
Credit Card transactions	1441
MILSTRIPS	134
FedEx bills of lading (non-DLA)	2399
Prompt payment invoice certifications	652
Number of items on invoices certified	2396
Travel orders	944
Correspondence	75
Training documents	120
Naval Messages	759
Shipping documents (DD1149)	2145
Classified documents and other media	2093
• Held	195
• Destroyed	554
• Transmitted	1344

SSC SAN DIEGO  
C<sup>4</sup>I PROGRAMS OFFICE  
PHILADELPHIA

FY00 FUNDING  
BY AGENCY

TOTAL: \$61,980,700



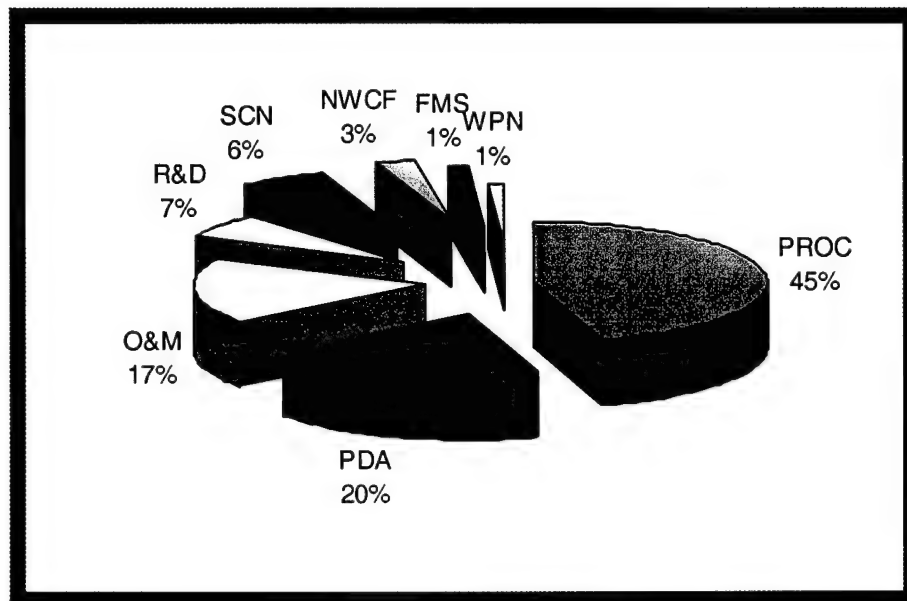
NAVY	\$ 44748.2
NIMA/JOINT	\$ 16789.0
USAF	\$ 443.5

Figure 5. Funding By Agency

**SSC SAN DIEGO  
C<sup>4</sup>I PROGRAMS OFFICE  
PHILADELPHIA**

**FY00 FUNDING  
BY APPROPRIATION**

**TOTAL: \$61,980,700**



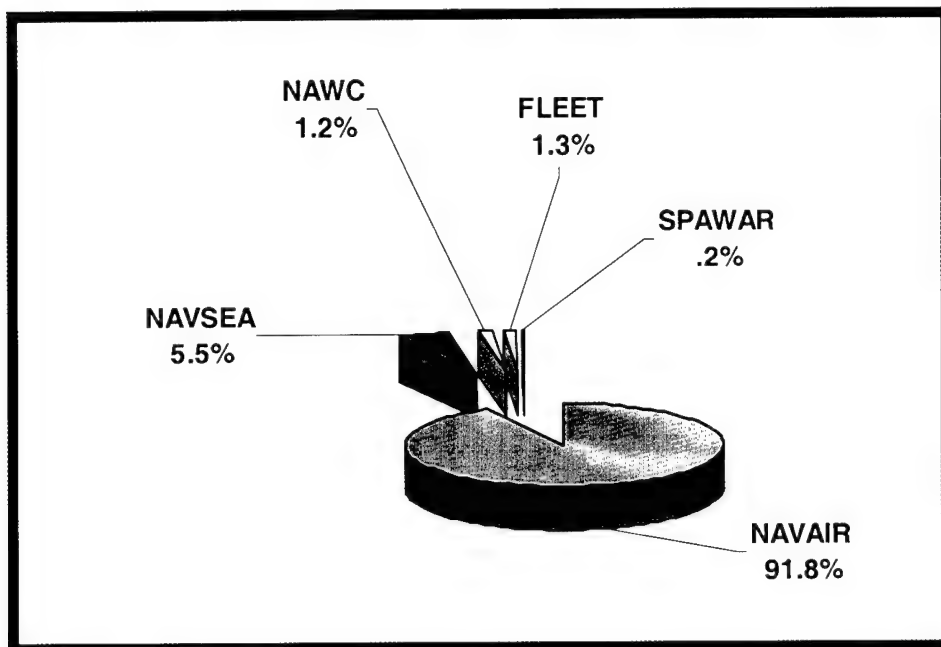
■ PROC	\$ 27998.5
■ PDA	\$ 12193.9
□ O&M	\$ 10709.9
□ R&D	\$ 4065.9
■ SCN	\$ 3657.7
■ NWCF	\$ 1719.3
■ FMS	\$ 919.5
□ WPN	\$ 716.0

**Figure 6. Funding By Appropriation**

**SSC SAN DIEGO  
C4I PROGRAMS OFFICE  
PHILADELPHIA**

**FY00 FUNDING  
BY NAVY CLAIMANT**

**TOTAL: \$44,748,200**



NAVAIR	\$ 41096.7
NAVSEA	\$ 2441.0
NAWC	\$ 561.5
FLEET	\$ 576.0
SPAWAR	\$ 73.0

**Figure 7. Funding By Navy Claimant**



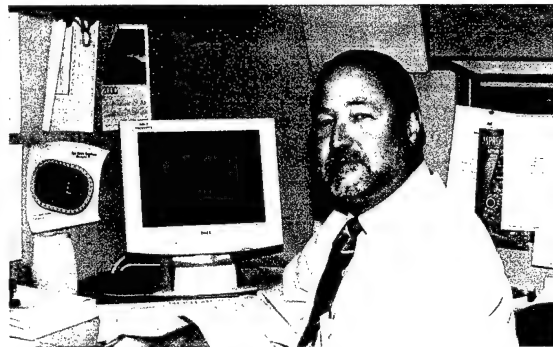
## CONTRACTING

SSC San Diego C4I Programs Office Philadelphia's Total Obligating Authority (TOA) was \$61.9 million. Of the total, over \$57.1 million was used in the acquisition of goods and services in support of assigned projects. The primary contracting agency utilized for procurement was the Fleet and Industrial Supply Center (FISC), Norfolk Detachment Philadelphia. By dollar volume, over 62 percent of FISC actions were awarded under the competitive bidding process. Significant activity employing MILSTRIP contracting was also conducted with the Defense Industrial Support Center, Philadelphia, in support of the Digital Photo Lab (DPL) project.

Government credit card usage accounted for over 1,440 transactions in FY00. The implementation of electronic reconciliation of monthly statements was accomplished smoothly and without negative impact.

SSC San Diego C4I Programs Office Philadelphia personnel provided trained and experienced administrative and technical assistance as Contracting Officer's Representatives (COR) for five major multi-year engineering and technical contracts supporting ongoing projects. A new multi-year services contract for imagery support was awarded in FY00. Options on the other four contracts were exercised during the fiscal year.

The current CORs supporting these contracts are:



Dean Kralle, Engineering and Repair Services



Rhea Feldman, Technical and Facility Support Services



Eileen Nikander, Engineering, Fabrication, and Installation Services

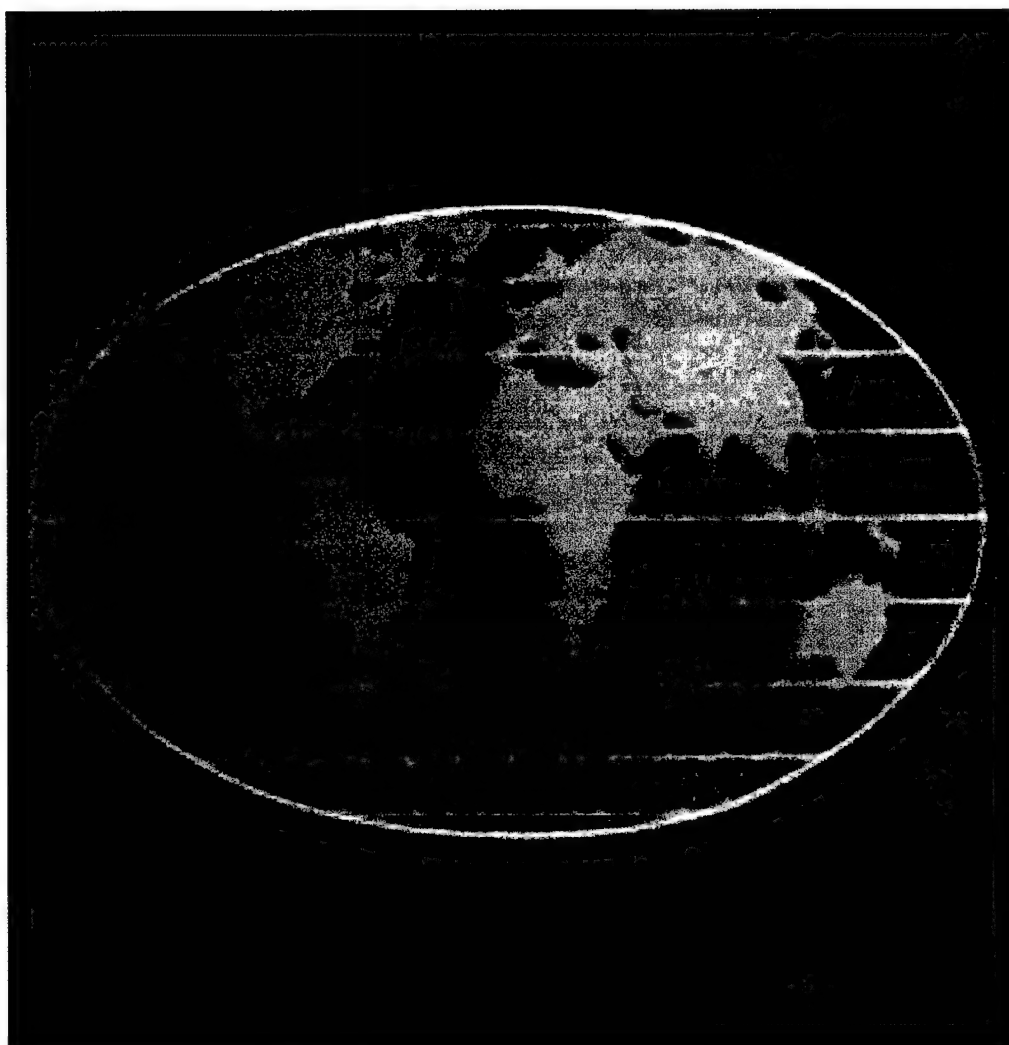


Lou Di Girolamo, Engineering and Technical Services

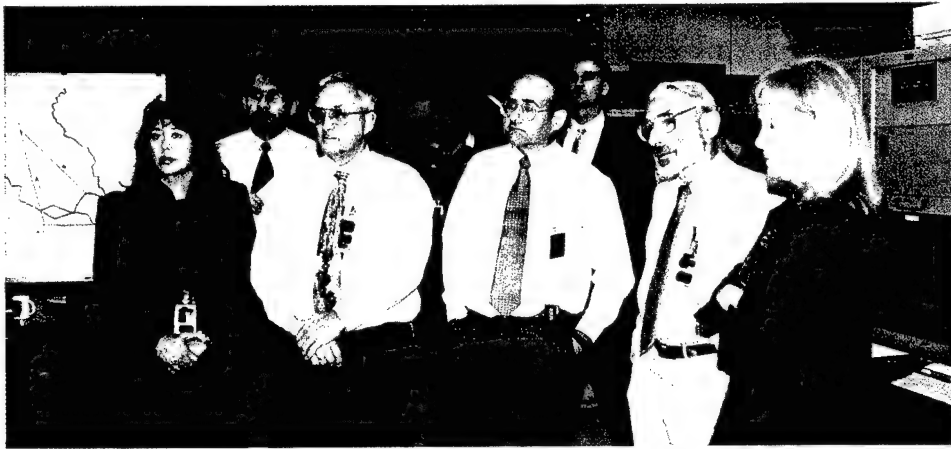


Anthony Brancato, Imagery Support Services

# TECHNICAL ACCOMPLISHMENTS 2000



## STRIKE INTERFACE TEST FACILITY



*SSC San Diego visitors (front row) Miriam Glorioso, Fred Kramer, Dr. R. Jaffee, Dr. S. B. Schneiderman, and Sue Patterson tour the Strike Interface Test Facility. F. Escobar and K. O'Malley (back row) observe.*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia established a Strike Interface Test Facility (SITF) in FY99. This facility was designed to combine all the primary systems that are used by the mission planners aboard aircraft carriers. These systems include the Imagery Product Library (IPL), the Precision Targeting Workstation (PTW), the Digital Camera Receiving Station (DCRS), the Tomahawk Land Attack Missile (TLAM) Afloat Planning System (APS), the Launch Platform Mission Planning (LPMP) System, the Global Command and Control System-Maritime (GCCS-M), the Tactical Automated Mission Planning System (TAMPS), and the Navy Portable Flight Planning Software (N-PFPS).

This unique configuration is one of the first shore-based facilities with all currently fielded equipment operating in an Integrated Shipboard Network Systems (ISNS) certified networked environment. The equipment and network connections of the lab can be readily modified to match any current or projected shipboard configuration. The Strike Interface Test Facility lab is staffed and maintained by experts in the development, installation, support, and operation of each system. In FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia fully exercised our capabilities by providing operational procedure development, testing, training, and fleet support services for both deployed military units and developmental systems.



*F. Greco demonstrates IPL as F. Escobar, Miriam Glorioso, Fred Kramer, and Dr. R. Jaffee, observe.*



*K. O'Malley explains the configuration of the SITF as Dr. R. Jaffee, T. Boyce, Dr. S. B. Schneiderman, and C. A. Norton observe.*

## ENGINEERING & TECHNICAL SUPPORT TO PMA-281 FOR AFLOAT PLANNING SYSTEM (APS)

**Role:**

- Technical Services
- Installation Planning
- Testing Support
- Integrated Logistics Support



The Afloat Planning System (APS) is comprised of the computer system and applications software items, which provide for the planning, distribution, and employment support of the Tomahawk Land Attack Missile (TLAM). APS will provide each Battle Force/Battle Group (BF/BG) Commander with the same functional capability as the shore-based Cruise Missile Support Activity (CMSA) for planning conventional TLAM missions. The APS can facilitate a reduction in the dependence on non-organic assets or long-haul communications for management information system data during crisis surge and/or hostile activity.



*Dennis Rozanski, Head,  
Cruise Missile Command & Control  
Systems Support Office*



*Bill Nork, Deputy,  
Cruise Missile Command & Control  
Systems Support Office*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's APS efforts for FY00 included coordinating and participating in the installation of hardware and/or software and testing of the APS on the platforms listed below. We architected, procured, assembled, and integration tested all TAC-4 hardware installed on the following platforms:

*USS Enterprise (CVN 65)*  
*USS Carl Vinson (CVN 70)*  
*USS Theodore Roosevelt (CVN 71)*  
*USS Abraham Lincoln (CVN 72)*  
*USS Harry S. Truman (CVN 75).*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia also installed a Launch Platform Mission Planning (LPMP) System at Commander, U. S. Fifth Fleet (COMFIFTHFLT). As part of the Fleet Battlelab Experiments Golf (FBE-G), we architected, procured, assembled, and integration tested and installed LPMP Systems onboard the *USS Anzio (CG 68)* and the *USS Cape St George (CG 71)*.

**Point of Contact:**

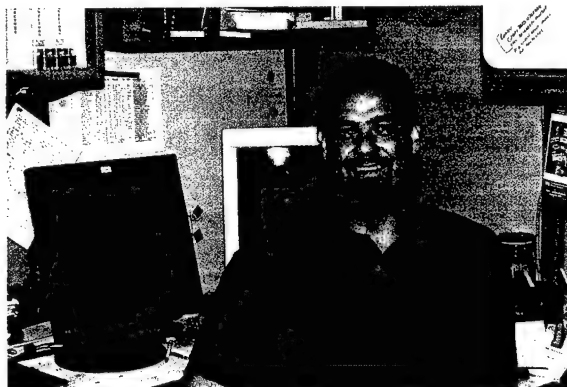
**Mr. Allan M. Gaidis**, Code D4232

Tel: (215) 214-8033; DSN 442-8033

FAX (215)-214-8109

Email: [gaidis@spawar.navy.mil](mailto:gaidis@spawar.navy.mil)

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia



*Allan Gaidis, Installation Support*



*Jim Steib, Installation Support*



*Steve Hoshowsky, Engineering Support*

## ENGINEERING & TECHNICAL SUPPORT TO PMA-281 FOR JOINT SERVICE IMAGERY PROCESSING SYSTEM - NAVY (JSIPS-N)

**Role:**

- ➔ **Engineering/Technical Services**
- ➔ **Installation Planning**
- ➔ **Testing Support**
- ➔ **Integrated Logistics Support**



The Joint Service Imagery Processing System – Navy (JSIPS-N) is a digital imagery processing and management system. JSIPS-N provides the capability to receive, process, exploit, store, and disseminate imagery, imagery derived products, and imagery intelligence based on multi-source imagery from national and tactical sensors. The primary mission of JSIPS-N is to assist Strike Planners, Tactical Aviators, and Marine Corps Amphibious Planners in the delivery of precision ordnance on target. The secondary missions of the system are (1) to provide near real-time imagery and support to fleet intelligence assets and Special Operations Forces, and (2) to support primary exploitation and dissemination of tactical imagery intelligence products.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's effort for FY00 included coordinating the installation of hardware, software, and testing of the JSIPS-N system onboard the following platforms:

*USS Carl Vinson (CVN 70)*  
*USS Enterprise (CVN 65)*  
*USS Harry S. Truman (CVN 75)*  
*USS Kitty Hawk (CV 63)*  
*USS Abraham Lincoln (CVN 72)*  
*USS Constellation (CV 64)*  
*USS Blue Ridge (LCC 19)*  
*USS Mount Whitney (LCC 20)*  
*USS La Salle (AGF 3)*  
*USS Coronado (AGF 11)*  
NSAWC Fallon  
NMITC  
CMSALANT

CMSAPAC  
WPC  
*USS Wasp (LHD 1)*  
*USS Essex (LHD 2)*  
*USS Kearsarge (LHD 3)*  
*USS Boxer (LHD 4)*  
*USS Bataan (LHD 5)*  
*USS Bonhomme Richard (LHD 6)*  
*USS Tarawa (LHA 1)*  
*USS Saipan (LHA 2)*  
*USS Nassau (LHA 4)*  
*USS Peleliu (LHA 5)*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia participated in the selection, procurement, integration, evaluation and installation of Precision Targeting Workstation (PTW) 4.0 hardware at afloat and shore sites. In addition, we participated in the following JSIPS-N development efforts:

- Tactical Input Segment (TIS)
- Transit Case Tactical Input Segment (TTIS)
- JSIPS-N Concentrator Architecture (JCA)
- PTW 4.0
- Printer Studies
- JSIPS-N/GCCS-M (ISNS) LAN Investigations
- RAID Studies
- Display Studies

To ensure JSIPS-N compliance with NAVSEA installation requirements, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia maintained an interface with Naval Sea Systems Command (NAVSEA). We developed JSIPS-N Ship Alteration (SHIPALT) Records for multiple ship classes utilizing an incremental installation approach. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia utilized the NAVSEA scheduling process to accomplish installations during CNO availabilities.

**Point of Contact:**

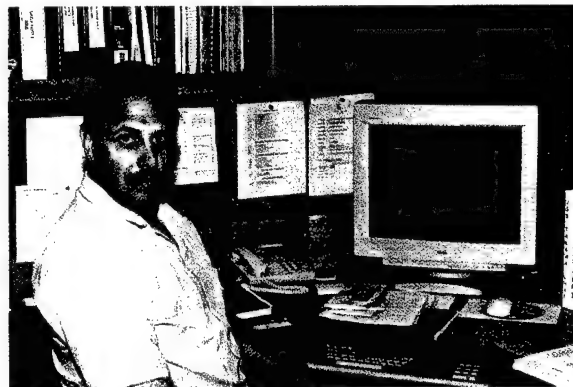
**Mr. Mark Cunningham, Code D4232**

Tel: (215) 214-8035, DSN: 442-8035

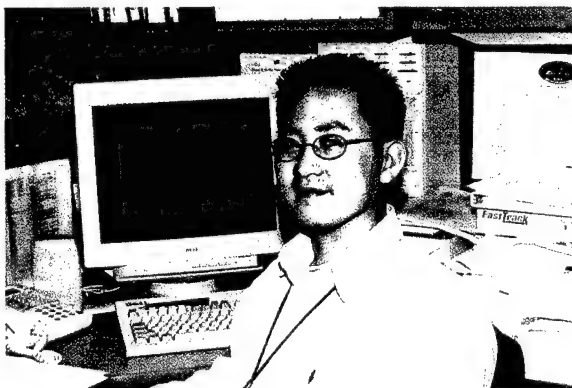
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SSC San Diego C<sup>4</sup>I Programs Office Philadelphia



*Mark Cunningham, Engineering Support*



*Kenneth Chung, Engineering Support*



*Ed Zantek, Installation Support*



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## NAVAL STRIKE WARFARE PLANNING CENTER (NSWPC)

### Role:

- **Compilation and Analysis of System Data**
- **Space Utilization and Design**
- **Installation Planning Support**

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia produces and updates installation guides for all the systems under its cognizance. The installation guides contain the system's Installation Control Drawings (ICD) and the parametric data necessary to prepare the Ships Installation Drawings (SID), which are required to install equipment onboard a ship. The information from these installation guides and the collected data from other systems located in the Aircraft Carrier Intelligence Center (CVIC) are used to plan for the orderly addition of new equipment and the updating of existing systems.

During FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia continued to support this effort by providing technical assistance, participating in design reviews and other technical meetings, and serving as liaison with several Program Offices in all of the Systems Commands.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provides planning support to PMA-281 and the Design Center for the *USS Nimitz* (CVN 68) and the *USS Ronald Reagan* (CVN 76). With many new systems coming aboard, our personnel are working in conjunction with the Commander, Naval Air Force, Atlantic Fleet (COMNAVAIRLANT) and the Washington Planning Center (WPC) to develop a more functional CVIC.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia developed and configured the Prototype Integration Facility (PIF) for the Naval Strike Warfare Planning Center (NSWPC) in Washington, D. C. Operated by PMA-281, the PIF is used for both systems engineering and ship's force familiarization with CVIC equipment. The PIF allows these functions to be completed prior to installation onboard an aircraft carrier that is either being built or undergoing a complex overhaul at Newport News Shipbuilding.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's team designed and installed the electrical power distribution for electronic equipment in the PIF, which was completed in May 2000. The team provides procurement support and installation support associated with the electronic systems installations. A reduced package of *USS Nimitz* (CVN 68) equipment has been cycled through the PIF. A full complement of *USS Ronald Reagan* (CVN 76) equipment is being planned.

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*Jim Engelke, Installation Support*



## TOMAHAWK MISSION PLANNING SHORE SITE SUPPORT

### Role:

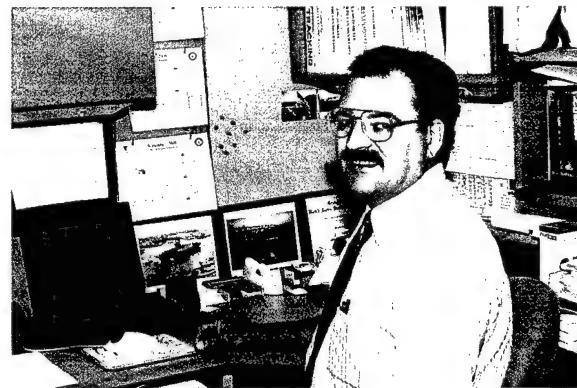
- **Installation Planning, Implementation and Suite Light-Off and Checkout**
- **Direct On-Site Support and Upgrade Implementation**
- **Configuration and Uniformity Management**
- **Integrated Logistics Support**
- **Physical and Automated Information System (AIS) Accreditation Assistance**
- **Coordination and Security Guidance and Assistance**
- **Coordination of Rapid Deployment Suite (RDS) Plant Engineering and Integration**
- **Overall coordination of TOMAHAWK Land Attack Missile (TLAM) Mission Planning Systems (MPS) at shore facilities**



SSC San Diego C<sup>4</sup>I Programs Office Philadelphia was integral to the subsistence and growth of all PMA-281 supported TOMAHAWK Land Attack Missile (TLAM) Mission Planning Systems (MPS) and Tactical MPS (TMPS) shore sites during FY00. Included in these shore sites are the primary MPS sites at Cruise Missile Support Activity Atlantic (CMSA LANT), Pacific (CMSA PAC), and United Kingdom (CMSA UK); and TMPS operations at the Afloat Operational Support Detachments Atlantic (AOSD LANT) and Pacific (AOSD PAC), Naval Strike and Air Warfare Center (NSAWC), and Commander, U.S. Fifth Fleet (COMFIFTHFLT).

Tasking from PMA-281 encompasses support of the Theater Mission Planning Center (TMPC), Joint Service Imagery Processing System-Navy (JSIPS-N), and Afloat Planing System (APS) hardware and systems, often requiring direct involvement with facility modifications and upkeep. Although the sites are generally either configured as TMPC or tactical APS/JSIPS-N suites, no two suites are identical. Installation practice normally includes alterations to site facilities, as well as systems.

The TMPS suites located at AOSD LANT, AOSD PAC, and NSAWC are unique in that each was incorporated into a set of four mobile shelters capable of deployment to any land or shipboard platform within a short timeframe. These suites have played a primary role in the training arena; however, they have each been used to support local operations during periods when one of the respective CMSA sites was inoperable due to maintenance or the installation of upgrade enhancements. Since the need for deployment has been reduced by maximized shipboard installations, a major effort to relocate these suites into permanent quarters



*Stephen Kubicki Jr., Installation Support*

was undertaken during FY00. Overseeing the construction, accreditation, and planned relocation of the AOSD LANT hardware suite to a new secure facility has engaged SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's efforts for the past six months. Negotiations to relocate the AOSD PAC and NSA WC suites with their respective host activities continue.

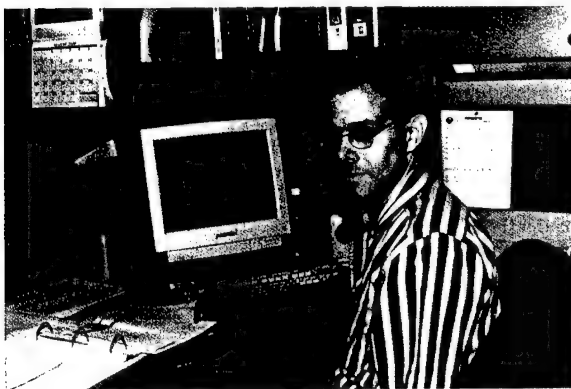
Equally important was the planning and implementation of a hardware suite upgrade at CMSA PAC. Coordinating contracted services (local Hawaiian and mainland United States), ensuring the availability of installation materials, and scheduling concurrent hardware deliveries presented additional challenges created by the location of the site. The entire effort was completed on time, within budget, and without incident. Planning and preparations to perform the same upgrade at CMSA LANT in Virginia are now in progress with implementation scheduled for early FY01. A similar effort is anticipated for CMSA UK within the next year.

Support afforded COMFIFTHFLT during FY00 included preparing a Basic Electronic System Engineering Plan (BESEP) for relocation of the TMPS suite from its present location to new quarters, both situated in Manama, Bahrain. Commencement in FY03 is expected. A hardware upgrade and on-site system groom designed to improve overall system operations was also successfully accomplished. During and after the visit, all installation documentation was reviewed, redlined corrections made, and archived drawings updated.

With the exceptions of CMSA UK and COMFIFTHFLT, each site was visited at least twice during FY00 to ensure operational and physical integrity. Maintenance of site documentation and drawing packages is a continual evolution as is the training of on-site personnel regarding logistical matters, plant maintenance, and supply support.

**Point of Contact:**

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SSC San Diego C<sup>4</sup>I Programs Office Philadelphia



*John Kitano, Engineering Support*



*Jim Kitts, Logistics Support*

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## LOGISTICS PLANNING SUPPORT TO PMA-281

### Role:

- ➔ **Technical Support**
- ➔ **Maintenance Planning Support**
- ➔ **Engineering Support**
- ➔ **Documentation and Training**
- ➔ **Life Cycle Support**
- ➔ **Configuration Management**



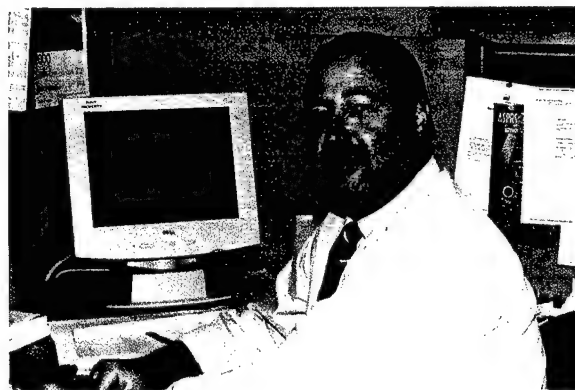
During FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia completely overhauled the Web server hardware. The Redundant Array of Independent Disks (RAID) was upgraded to increase storage capacity. The power failure recovery plan was refined and tested by several simulated real-world power failures. In preparation for a catastrophe, a new tape back-up device was installed, and a new plan was developed to provide for more complete backups. New software was incorporated, including Seagate's Crystal Reports, and software training was provided.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's Web Sites were granted the mandatory Department of Defense (DoD) Public Key Infrastructure (PKI) server certificates. The Logistics Planning Support team studied the fundamental theory and applicable methods of PKI server and client based digital signatures mandated to be used by all DoD email and web users within the next two years. We have worked with other telecommunication activities in the NAVAIR and SSC communities to ensure our customers experience the fewest possible interruptions in service. We have expanded technical support so now our Web Site users may call the PMA-281 Help Desk and initiate a technical support action.

Most recently, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia has created a SIPRNET Web Site. This classified web site will be devoted to fleet support that augments the Help Desk and optimizes the troubleshooting and operational status reporting.



*Jim Barnes, Logistics Support*



*Dean Krall, Logistics Support*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia has worked to distribute the Logistics Support Library (LSL). All revised and new COTS manuals that support the PMA-281 systems were collected and sent to DAPS (Defense Automated Printing Services), where the documents are scanned, converted, and stored in a large data repository. The LSL is built from this repository. Each customer site received four copies of the seven CD pack, which was hand delivered; our fleet technicians provided installation training. Submission of the LSL for acceptance to the ISNS Preferred Product List (PPL) is planned for FY01. New documentation efforts include tasking to produce an updated Equipment Technical Manual (ETM) for the JSIPS-N and tasking to produce a new ETM for the PTW 4.0.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia Logistics Planning Support team developed web pages for parts, maintenance, and configuration change information for all vessels in order to provide real-time supply support information to the fleet. Supporting documentation is produced in a Portable Document Format (PDF) file and placed on the SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's LifeLine Web Sites. Each ship can access documentation containing supply support and preventive maintenance documentation. As systems are upgraded, new and revised PDF documents are created and posted on the LifeLine Web Sites. This improvement using the Extranet and Intranet technologies provides the fleet with continuous access to supply support and configuration data without the need to create and ship hard copy around the world.

In an effort to improve configuration accounting, direct Internet access to the Configuration Data Manager databases was established via a user account and password and using the Oracle database downloaded to the personal computers of supply support logisticians. This database contains the configuration of each ship's systems. It is the master database, which is input to the Navy's master systems database known as the Weapon Systems File. Support personnel can view the contents of this database and perform quality control checks to identify any missing or incorrect configuration.

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SSC San Diego C<sup>4</sup>I Programs Office Philadelphia



*Dennis Alexander, Logistics Support*



*Joe Di Pardo, Logistics Support*

## WASHINGTON PLANNING CENTER (WPC)

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provides various Logistic Support services to the Washington Planning Center (WPC). We provide a single Point of Contact to administer and provide status for numerous procurement requests. These tasks include researching and purchasing computer hardware, software, and peripherals; furnishing various transportation services for hardware and software releases; providing warehousing services for displaced systems; and maintaining the Configuration Management records for the WPC site.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia was tasked to provide on-site technical support to the WPC for the Tomahawk Planning System, Precision Targeting Workstation (PTW), and other various peripherals. The on-site technician provided a daily maintenance log and submitted system availability data, which is critical to maintenance philosophies. A contingency of this tasking was the opportunity to expand our role by offering and providing assistance in developmental programs. Our availability to assist in prototyping these experimental systems will expand our presence and evidence our expertise in evolving technologies.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia added and upgraded several systems in order to keep pace with technological advancements and fleet configurations. PTW 4.0 was added to the JSIPS-N architecture. The IPL was upgraded to a terabyte system to provide increased memory and storage capabilities. For increased performance, the HP RAIDs on the National Input Segment Dissemination Element (NIS(DE)) were replaced with the CIPRICO 6900 RAIDs. On the TOMAHAWK Mission Planning Systems (TPS) US and UK systems, the Falcon RAIDs were upgraded with CIPRICO 6900 RAIDs, which more than doubled the storage capacity.

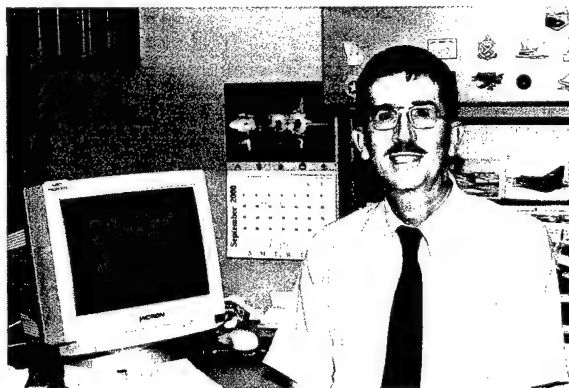
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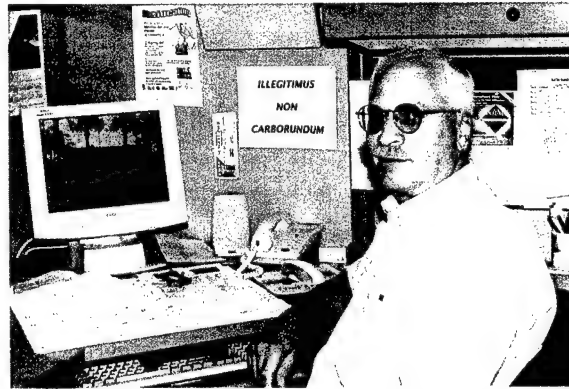
SSC San Diego C<sup>4</sup>I Programs Office Philadelphia



*Frank Davies, Logistics Support*



*Ted Morrison, Installation Support*



*Bohdan Sobkiw, Logistics Support*

## NAVAL MISSION PLANNING SYSTEMS (NavMPS)

### Role:

- Systems Engineering
- Fleet Introduction and Installation
- Installation Planning
- Technical Support Help Desk
- Logistics Management
- Procurement Support



Naval Mission Planning Systems (NavMPS) is a family of interactive graphic computer systems supporting aircrew mission and strike planning for United States Navy and Marine Corps airborne weapon systems. These systems consist of the Tactical Automated Mission Planning System (TAMPS), the Navy Portable Flight Planning Software (N-PFPS), and the Joint Mission Planning System (JMPS), which is currently in development. TAMPS was first deployed in 1987 at the direction of the Secretary of the Navy. In 1991, TAMPS was established as a program and became PMA-233. In 1999, the Program Office name was changed to Naval Mission Planning Systems to encompass the additional responsibility for other planning applications. With the exception of JMPS, these systems are currently installed onboard aircraft carriers, at shore bases, intelligence centers, weapons schools, and aviation support facilities throughout the world. In FY00, SSC San Diego C-I Programs Office Philadelphia continued to support NavMPS by providing systems engineering, installation, technical assistance, On-the-Job Training (OJT), on-call fleet support, logistics management, and procurement support for all hardware and software versions of the NavMPS family of products.

Addressing the Navy's Y2K requirements, four Fleet Installation Teams (FIT), each consisting of one technician and one applications specialist, began FY00 with the responsibility for completing TAMPS version 6.2K hardware and/or software upgrades on four aircraft carrier CVIC server configurations.



*Steve Fox, Head, Naval Mission  
Planning Systems Support Office*



*Karen Levine, Deputy, Naval Mission  
Planning Systems Support Office*



The FIT also upgraded the workstations that were deployed with thirty-six squadrons in the associated airwings. The carrier installations required a complete hardware change due to the new mission planning local area network (LAN) configuration and functionality occurring simultaneously. The TAMPS 6.2 concept onboard CV/CVNs involves a LAN connecting the CVIC-based Sun E4000 TAMPS Server with as many as forty Ultra II Desktop TAMPS in the squadron ready-rooms. All teams submitted installation documentation in accordance with NAVSEA Technical Specification (NSTS) 9090.310b.

The installation of the hardware and software is the framework of the TAMPS program; the logistics support and systems engineering are the muscle. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia has not only continued to develop the required standard operational documents, but also systems engineering and design documents. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia developed and distributed Getting Started Charts and pocket checklist booklets for mission planners and System Administrator/Data Base Administrator (SA/DBA) to provide operators with a convenient reference for equipment setup and operation.

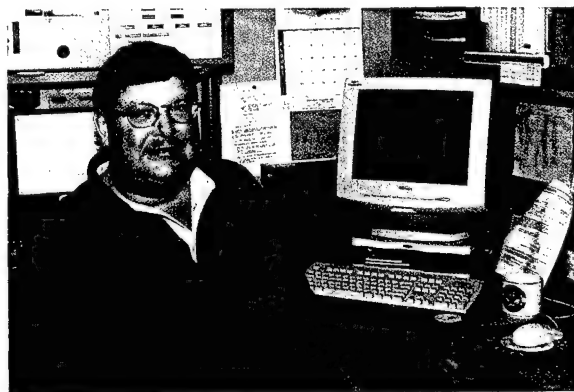
All maintenance and user documentation was updated and distributed for the NavMPS products in preparation for TAMPS version 6.2.1. TAMPS user manuals and training materials for Mission Planning and SA/DBA were updated to support TAMPS version 6.2.1 and distributed to the schoolhouse. Instructor training for these courses is scheduled for the first and second quarters of FY01 during Operational Test (OT).

TAMPS 6.2K spares were procured, and TAMPS 6.2.1 spares requirements have been identified for procurement in FY01. On Board Repair Part (OBRP) Kits were distributed and re-stocked to support deployed systems. The Logistics Certification process has been implemented successfully for TAMPS 6.2K installations and to ensure complete delivery of all spares kits and documentation for each installation.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's training group has coordinated our efforts with PMA-233 and various NavMPS training sites. The training group continues to closely coordinate with the Airwing Operations Officers. This coordinated effort has helped to familiarize users with our products and the benefits to aircrews. Our goal is to expose airwing personnel to NavMPS early in the pre-



*Dave Salmon, Installations Support*



*Craig Doster, Logistics Support*

deployment work-up cycle. As part of the long-term NavMPS training initiative, we have visited numerous Fleet Replacement Squadrons and Weapons Schools to assess current training efforts and to lay the groundwork for implementing the training policy outlined in the Navy Training Systems Plan. To facilitate implementation of the training policy, we have been active in customizing existing training materials to support community specific instruction. We are currently in the stand-up phase of conducting classes in advanced NavMPS operation at SSC San Diego C4I Programs Office Philadelphia's Strike Integration Test Facility. These classes will provide fleet operators with the opportunity to train at one of the few shore based locations with both the facilities and expertise to provide instruction in fully integrated employment of NavMPS, Intelligence, and Imagery systems.

Navy Portable Flight Planning Software (N-PFPS) Version 3.1.1 was distributed. Additional Flight Performance Modules (FPM) were distributed as they were certified. SSC San Diego C4I Programs Office Philadelphia completed the procurement, assembly, testing, and delivery of more than 800 N-PFPS systems. Maintenance plans, the User Logistic Support Summary (ULSS), the User's Manual, and other on-line documentation were updated. N-PFPS training is in development for commencement in early FY01.



*J.C. Fitzgerald, Logistics Support*



*Chuck Storicks, Logistics Support*



*Paul Steinbacher, Logistics Support*

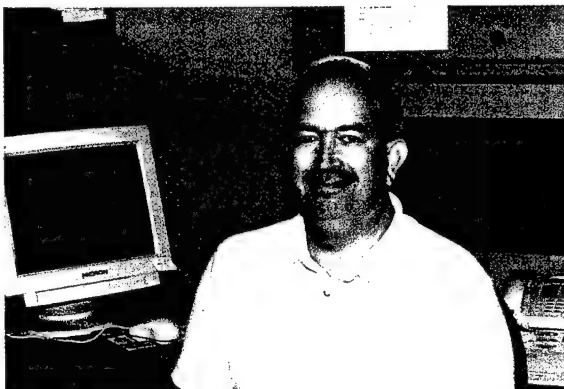


*Timothy Boyce, Logistics Support*



As the support agency for NavMPS products, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia participated in the JMPS System Test and the Sustainment Tiger Teams. The System Test Team presented their recommendations to the JMPS leadership for a cost saving approach to testing software using a component-testing approach. The System Test Team advanced the realization of the distributed test concept, as well as, developed a process to efficiently share test results in a joint test environment. The Sustainment Tiger Team provided its sustainment recommendations to the JMPS leadership and transitioned into the Operational Support Integrated Process Team (IPT) in which we participate. This IPT developed a Statement of Work for contracting JMPS logistics support to be implemented in FY01.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia Mission Planning Systems Help Desk continues to provide telephone support and visits to numerous sites worldwide, both ashore and afloat. The Help Desk provided technical and repair assistance, training, software and hardware installation, and crossdeck of systems between ships. The Help Desk participates in the In Process Review of all technical manuals. We also test new versions of software and the interfaces between NavMPS systems and other systems. We tested the TAMPS 6.2K to Global Command and Control System – Maritime (GCCS-M) version 3.1.2.1 interface. In addition, the Help Desk tested the TAMPS 6.2K to GCCS-M version 3.2 interface and helped to develop the patch to correct interface issues that were identified.



*Michael Slough, Logistics Support*



*Mary Williams, Logistics Support*



*Bob Grant, Fleet Liaison*



*Beth Ann Miles, Logistics Support*

Help Desk support continues for the TAMPS version 6.1.1f systems installed onboard the French Navy aircraft carrier, the *Charles de Gaulle*, and at the French maintenance facility as part of the Foreign Military Sales (FMS) program at PMA-233. On-site support was provided to resolve an issue with the Multi-function Control Display Unit in the French E-2C. Support is scheduled to continue through FY03.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's NavMPS shipriders have been successfully deployed aboard carriers, both during deployment and during work-ups. The support these technical representatives provide to all NavMPS systems has been well received by both the ships' crew and the airwing personnel. Shipriders have received repeated recognition from ships' commanding officers and airwing commanders, who have described Fleet support from our shipriders as indispensable. We have provided post-cruise debriefs to PMA-233 leadership IPT leads, OPNAV requirements officers, and sponsors from N62 and N88.

The SSC San Diego C<sup>4</sup>I Programs Office Philadelphia Systems Engineering Team supported the development efforts for PMA-233 products and systems. Support of TAMPS 6.2.X and N-PFPS products constituted the majority of engineering efforts including the selection, integration, testing, documentation, Integrated Shipboard Network Systems (ISNS) certification and implementation of CVIC Suites, ISNS compatible ATM network, and workstation hardware suites. The shipboard rack configurations and CVIC hardware suites were designed and developed. TAMPS system network performance was tested, evaluated, and ISNS-certified utilizing the shipboard network and fleet



*Judy Jolly, Logistics Support*



*John Sheplock, Logistics Support*



*Fran Brown, Logistics Support*

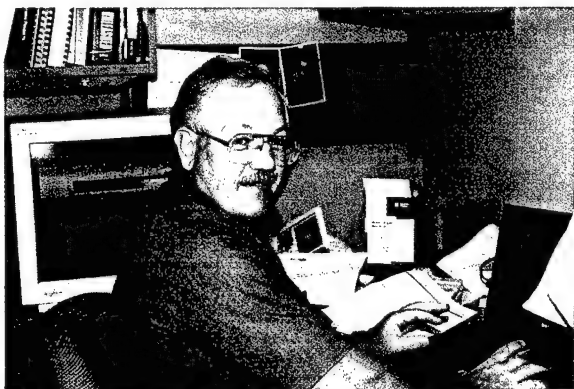


*Paul Meisinger, Engineering Support*

representative hardware systems in the SSC San Diego C<sup>4</sup>I Programs Office Philadelphia laboratory. N-PFPS computer selection and ISNS certification are distinct highlights for this year. As NavMPS transitions their System of Applications concept into product development and deployment, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia engineering is positioned to provide the resources and the expertise necessary to succeed in this highly integrated, and network-centric Commercial Off-the-Shelf (COTS) environment.

Specific engineering efforts included:

- ♦ Coordinated/implemented ISNS requirements and guidelines into the TAMPS Mission Planning LAN (MPLAN) Network Design.
- ♦ Designed, developed and documented the PC X-Windows configuration for TAMPS 6.2.1.
- ♦ Designed and developed the mapping server space required by TAMPS 6.2.1 utilizing a SUN COTS product. PC NetLink allows CVIC and ready-room users to save setting profiles, routes and maps on the RAID array of the TAMPS CVIC Server. This implementation will lay the ground work for JMPS Combat Version.
- ♦ Designed, developed, and installed MPLAN fiber plant for the *USS Harry S. Truman* (CVN 75) and the *USS George Washington* (CVN 73).
- ♦ Performed development testing on Dual ATM, "Out of the Box" SIPRNET and provided assistance to NAVAIR on Certification and Accreditation issues.
- ♦ Developed a workaround to a TAMPS 6.2.1 problem related to workstation shutdown procedures when the TAMPS primary server is unavailable. Developed a solution to STOP-A (L1-A) CPU halt function and developed procedures for setting up a NIS replica server on the 2300 and Network File Server mount background tasks.
- ♦ Developed the Advanced Tactical Air Command System (ATACS) LAN requirements document
- ♦ Completed StriPP/ISNS version 5 LAN requirements document.
- ♦ Provided support of the installation of the Real-time Execution Decision Support (REDS) system on the *USS Harry S. Truman* (CVN 75).
- ♦ Submitted REDS/IT-21 LAN requirements document for review by PMW-158-2.
- ♦ Designed and developed an Uninterruptible Power Supply (UPS) for TAMPS 6.2.1 for the CVIC server configuration.
- ♦ Integrated an Internal Boot Disk in the Enterprise 4000 for maintenance use, and provided detailed procedures on the installation of this hard drive.



*Dennis Klinger, Engineering Support*



*Kevin O'Malley, Engineering Support*

- ♦ Installed TAMPS 6.2K and 6.2.1 using the new configuration.
- ♦ Obtained ISNS approvals for TAMPS 6.2K and N-PFPS 3.1 and 3.1.1.
- ♦ Completed the TAMPS 6.2K drawing package and commenced the drawing package for TAMPS 6.2.1.
- ♦ Installed the schoolhouse network design enhancement at several weapons schools.
- ♦ Developed NavMPS 6.2.1 Installation Guides for the *USS Nimitz* (CVN 68) and the *USS Ronald Reagan* (CVN 76).
- ♦ Supported installation requirements of Smart Track for the TAMPS 6.2.1.

The SSC San Diego C<sup>4</sup>I Programs Office Philadelphia Systems Engineering Team participated in network certifications and testing. We developed test plans and test procedures for N-PFPS testing by PMA-158-2 and PMA-157. N-PFPS versions 3.1 and 3.1.1 testing is complete and both are now certified network systems. The team also performed ISNS network certification testing for TAMPS 6.2K, which has also been certified. We assisted the Navy Center for Tactical Systems Interoperability (NCTSI) test team in the testing of Meteorological/Oceanographic (METOC) data and TAMPS message formats.

The Systems Engineering Team also designed and developed the new Mini-Server and Server Lite configurations for TAMPS 6.2.1. We continued to develop Engineering Change Proposals (ECP), to conduct trade studies, and to make the hardware selections for TAMPS 6.2.1 system modifications.

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*and*

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*Nhan Nguyen, Engineering Support*



*Christopher LaBohne,  
Engineering Support*



*Edward Dolecki, Engineering Support*

## DIGITAL CAMERA RECEIVING STATION

### Role:

- ➔ System Design and
- ➔ Integration
- ➔ Hardware and Software Engineering
- ➔ Procurement Support
- ➔ Documentation
- ➔ Training
- ➔ Life Cycle Support
- ➔ Configuration Management



The Digital Camera Receiving Station (DCRS) provides a digital imaging computer workstation under the Commercial-Off-The-Shelf Non-Development Item (COTS NDI) concept. This shipboard mounted workstation evolved from the Hand Held Digital Camera Reconnaissance System (HHDCRS), a portable system fielded in 1995. As the receive element for imagery from the F-14 Tactical Aircraft Reconnaissance Pod System (Digital Imagery) (TARPS(DI)), the DCRS provides near real-time digital imagery downlink capability of manned tactical reconnaissance from the F-14 aircraft. The DCRS also accepts digital photographic files and video inputs from all standard digital cameras and videotape formats. DCRS capabilities include digital photographic manipulation, high resolution video digitizing, National Image Transmission Format (NITF) conversion, Message Text Format (MTF) editor, a shipboard radio communications interface, and a local area network (LAN) interface for imagery dissemination within the aircraft carrier intelligence center (CVIC).

In late FY96, the Program Executive Office for Tactical Aircraft (PEO(T)) PMA-241 tasked SSC San Diego C<sup>4</sup>I Programs Office Philadelphia and the Naval Air Warfare Center - Aircraft Division, Indianapolis (NAWC-AD Indy) to design a near real-time digital imagery capability in the existing TARPS pods and associated F-14 aircraft. Working together, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia developed a prototype shipboard receiving station while NAWC-AD Indy developed a prototype airborne image transmission capability.

In FY97, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia designed and built the production version DCRS with full logistic and documentation support. Functional requirements resulting from the HHDCRS fleet evaluation were incorporated. The first DCRS was installed onboard the *USS Theodore Roosevelt* (CVN 71) to support VF-32 during deployment. The DCRS performed as designed, and numerous missions were flown successfully. Based on these missions, the Chief of Naval Operations (CNO) N88 identified this program as "urgent and compelling" and formalized it as a modification to operational requirement TW-30. DCRS installations were completed onboard six additional aircraft carriers and at two shore sites. A Portable DCRS (P-DCRS) was developed and fielded for the USMC Highly Mobile Multiple Wheeled Vehicles (HMMWV). In April 1997, CNO N88 hosted a TARPS(DI) and DCRS demonstration with reconnaissance flights over the Pentagon resulting in the formal announcement of Initial Operational Capability (IOC) for TARPS(DI) and DCRS.



During FY98, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia performed five aircraft carrier DCRS installations, thus completing all active aircraft carriers. An interface was established with the Global Command and Control System – Maritime (GCCS-M) system to allow rapid movement of imagery to the JOTS14 workstation. The P-DCRS design was modified for deployable squadron use. Fast Tactical Imagery (FTI) was initiated allowing transmission of imagery from the Low Altitude Navigation and Targeting Infrared for Night System-Forward Looking Infrared Imager (LANTIRN-FLIR).

In FY99, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided support to the Sea Control Wing, Atlantic for a new long-range capability, Organic Digital Imagery Now (ODIN), using S-3 aircraft. Several missions were supported with ODIN imagery successfully transmitting to the DCRS onboard *USS Dwight D. Eisenhower* (CVN 69) during exercises. In addition to the upgrading of six aircraft systems, four P-DCRS systems were built and fielded. A P-DCRS was modified for the *USS Coronado* (AGF 11) to support Fleet Battle Experiment - Echo.

In FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia performed one installation at the Strike Weapons and Tactics School, Atlantic (SWATSLANT), Oceana, Virginia, and upgraded five aircraft carrier and two shore site DCRS systems. We provided support to the Army during the Roving Sands/Purple Dragon Exercise for the receiving of FTI from tactical F-14 aircraft acting as Forward Air Controllers to an Army Tactical Exploitation System (TES) and Army Common Ground Station (CGS). Several missions were supported with FTI imagery transmitting to the TES, located at Fort Bragg, North Carolina, and the CGS located at Camp Lejeune, North Carolina. The TES and CGS successfully transmitted National imagery with Precision Guided Weapons (PGW) quality coordinates to the tactical F-14 aircraft for the prosecution of targets.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia supported PEO(T) PMA-241 at System Architecture Requirement and System Architecture Working Group meetings for TARPS(DI), FTI, and DCRS imagery requirements for the Naval Strike Warfare Planning System. Eleven telephone assistance requests, fifteen email assistance requests, two on-site technical support requests, three Combat Systems Readiness Assessments (CSRA), two Combat System Pre-Acceptance Tests (CSPAT), and two Casualty Reports (CASREP) were resolved. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provides a full range of services including custom design, development, system integration, installation, training, technical support, and life cycle management for the DCRS and airborne digital cameras and sensors.

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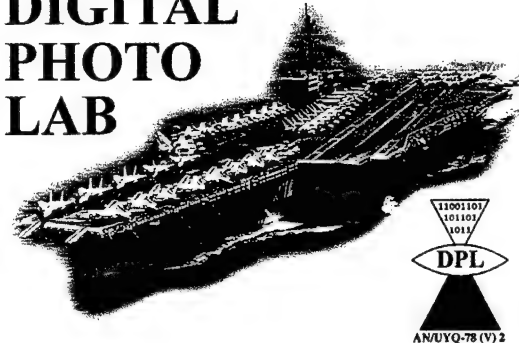
*Tim Urbanski, Head,  
Imagery Support Office*

## DIGITAL PHOTO LAB AN/UYQ-78(V)

### Role:

- System Design and Integration
- Hardware and Software Engineering
- Procurement Support
- Documentation Preparation
- System Training
- Life Cycle Support
- Configuration Management

### DIGITAL PHOTO LAB



The Digital Photo Lab (DPL) AN/UYQ-78(V) program provides a computerized digital photography suite using the COTS NDI concept. The DPL allows a full range of digital photographic processes and the interchange of digital photographic files with other shipboard and combat camera systems. This program offers the benefits of modern state-of-the-art computer technology which improves the way the U.S. Navy produces imagery by enhancing Visual Information, Public Affairs Office, Surface Surveillance Contact, and other photographic functions. An additional benefit of this program is the reduction of shipboard photo chemical overboard discharge to assist in fleet compliance with Environmental Protection Agency regulations. Use of the DPL allows photo production to continue while in port, in non-discharge zones, or in remote locations that have limited fresh water. The DPL program is divided into distinct phases to allow a multi-level approach to the conversion of existing wet-chemical photo labs with the flexibility to provide different configurations of the DPL for various classes of U.S. Navy vessels.

In FY94, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia personnel designed the shipboard-mounted DPL system with full observance of human engineering factors, mechanical shock and vibration, electrical safety, and equipment protection while optimizing functionality and versatility. Working with NAVSEA PMS-312, the production version DPL AN/UYQ-78(V)1 was authorized under SHIPALT 8424K (CV) and 8425K (CVN). DPL AN/UYQ-78(V)1 systems were installed onboard all active CV/CVN class aircraft carriers, and logistic support was provided. A collateral program produced the design and fielding of the Hand Held Digital Camera Reconnaissance System (HHDCRS) for fleet evaluation within the F-14 A/B/D Tactical Aircraft.

An improved DPL Engineering Development Model (EDM) accommodated new technology and compliance for Y2K and ISNS requirements. As the DPL EDM system matured into the AN/UYQ-78(V)1B-1C-2A versions, NAVSEA PMS-377



*Dennis Lloyd, Deputy  
Imagery Support Office*

authorized the DPL AN/UYQ-78(V)1C installation under SHIPALT 253K (LHD). DPL AN/UYQ-78(V)1C systems were installed onboard the *USS Boxer* (LHD 4), *USS Bataan* (LHD 5), and *USS Bonhomme Richard* (LHD 6).

In FY99, SSC San Diego C4I Programs Office Philadelphia continued as the Cognizant Field Activity (CFA) and Life Cycle Manager (LCM) for DPL systems installed in the fleet. The DPL systems onboard the *USS Kitty Hawk* (CV 63), *USS Constellation* (CV 64), *USS Enterprise* (CVN 65), *USS Theodore Roosevelt* (CVN 71), *USS Abraham Lincoln* (CVN 72), *USS George Washington* (CVN 73), and *USS John C. Stennis* (CVN 74) were upgraded to the DPL AN/UYQ-78(V)1B/U. The DPL systems onboard the *USS John F. Kennedy* (CV 67), *USS Dwight D. Eisenhower* (CVN 69), and *USS Harry S. Truman* (CVN 75) were upgraded to the DPL AN/UYQ-78(V)2A/U. The DPL system onboard the *USS Boxer* (LHD 4) was upgraded to the DPL AN/UYQ-78(V)1C/U.

In FY00, SSC San Diego C4I Programs Office Philadelphia upgraded the *USS Bonhomme Richard* (LHD 6) to the DPL AN/UYQ-78(V)1C/U and the *USS Carl Vinson* (CVN 70) to the DPL AN/UYQ-78(V)1B/U. The Navy and Marine Corps Intelligence Training Center (NMITC), Dam Neck, Virginia, DPL Training systems were upgraded to the DPL AN/UYQ-78(V)2A/U and the DPL AN/UYQ-78(V)1B/U. A DPL AN/UYQ-78(V)1B/U was installed at Fleet Imaging Command Pacific (FLTIMGCOMPAC) for training purposes. An EDM of the Next Generation DPL, the DPL AN/UYQ-78(V)3, was developed to bring together the complete workflow process in the CV/CVN and LHD photo labs. This system encompasses four to six workstations, a dedicated high-speed photo LAN, and digital non-linear video editing capabilities. A prototype was installed onboard the *USS Dwight D. Eisenhower* (CVN 69) and a modified version installed onboard the *USS Harry S. Truman* (CVN 75).

SSC San Diego C4I Programs Office Philadelphia supported meetings with NAVSEA PMS-312 and PMS-377, PEO(T) PMA-241, and CNO N09C4. Twenty telephone assistance requests, twenty-five email assistance requests, eight on-site technical support requests, four Combat Systems Readiness Assessments (CSRA), one Combat System Pre-Acceptance Test (CSPAT), and two Casualty Reports (CASREP) were resolved. Operator and maintainer training curricula were modified for implementation through the Chief of Naval Education and Training (CNET) schools.

SSC San Diego C4I Programs Office Philadelphia provides a complete range of services including design, development, customizing hardware and software, system integration, installation, training, technical support, and life cycle management for the Digital Photo Lab system, digital hand-held cameras, and digital photographic production techniques.

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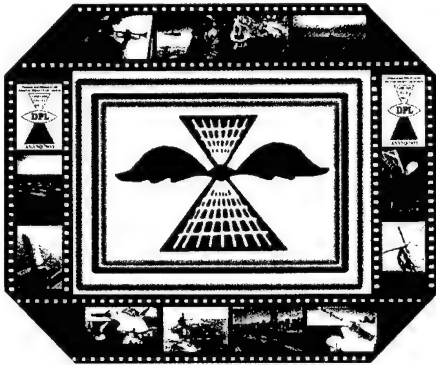
SSC San Diego C4I Programs Office Philadelphia



*Anthony Brancato, Engineering Support*



## FLEET PHOTO SUPPORT



### Role:

- Engineering and Design Support
- Acquisition Support
- Integrated Logistics Support
- Fleet Support

The Fleet Photo Support project provides support for conventional wet-chemistry photo labs onboard naval vessels. SSC San Diego C<sup>4</sup>I Programs Office Philadelphia supports new construction and existing sites with engineering, design, acquisition, integrated logistics, and on-site technical support. During FY00, new ship construction support was provided to NAVSEA PMS-312 and NAVSEA PMS-377. Engineering and design meetings were attended to identify replacement items for obsolete legacy equipment. Acquisition of Schedule "A" equipment, logistic item development, installation, test and certification, and training services were provided to update the photo labs onboard the *USS Kitty Hawk* (CV 63), *USS Constellation* (CV 64), *USS Enterprise* (CVN 65), *USS Theodore Roosevelt* (CVN 71), and *USS Abraham Lincoln* (CVN 72). The extensive overhaul of the four wet-chemistry photo processors onboard the *USS Constellation* (CV 64) resulted in a Bravo Zulu for the SSC San Diego C<sup>4</sup>I Programs Office Philadelphia team.

Integration of the conventional wet-chemistry photo processors with the Digital Photo Lab (DPL) LAN was accomplished onboard the *USS John F. Kennedy* (CV 67) and *USS Dwight D. Eisenhower* (CVN 69). Design and engineering support was provided for the reconfiguration of the CVIC photo lab onboard the *USS Nimitz* (CVN 68) and *USS Dwight D. Eisenhower* (CVN 69) to support the Naval Strike Warfare Planning Center. On-site technical support was provided for EH-38D processors and other Tactical Aircraft Reconnaissance Pod System (TARPS) film processing equipment onboard five U.S. Navy aircraft carriers. One Combat Systems Readiness Assessment (CSRA) and one Combat System Pre-Acceptance Test (CSPAT) were performed, and no Casualty Reports (CASREP) were generated.

### Point of Contact:

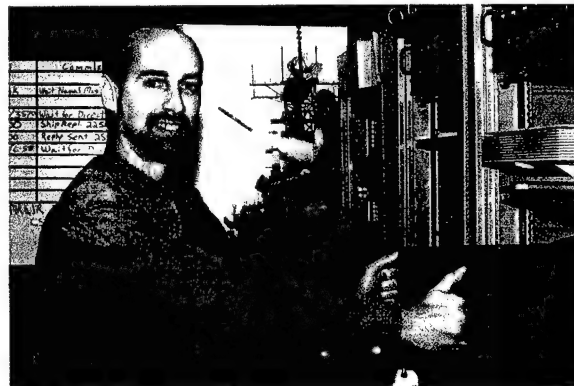
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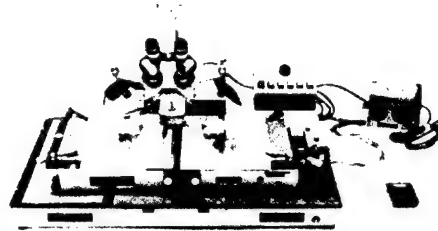


*Charles Soule, Logistics Support*

## ANALYTICAL PHOTOGRAMMETRIC POSITIONING SYSTEM (APPS)

### Role:

- Depot Maintenance
- Inter-Service Support
- Configuration Management



The Analytical Photogrammetric Positioning System (APPS) is a stand-alone transportable light table and stereoscopic viewing system. The APPS utilizes prepared hard copy imagery and supporting Point Positioning Data Bases (PPDB) to provide precision mensuration data consisting of geographic position, datum conversions, distances, angular displacement, heights, and elevation from features shown on the imagery. The derived data are used for mission planning.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia is the APPS Depot Maintenance Inter-Service Agreement (DMISA) agent providing on-site and depot level service for approximately fifty-three units used by the USAF and the USN.

During FY00, the majority of the APPS service was provided to the USAF. On-site technical support was provided at thirteen USAF CONUS sites, fourteen USAF overseas sites, and one USN shore site.

The DMISA contract was reviewed, and the terms and conditions were revalidated. During this process, the USAF asked for testing, validation, and necessary corrective action for APPS functionality with the Y2K transition. The APPS DMISA contract will be continued until the transition to digital imagery and support data is complete.

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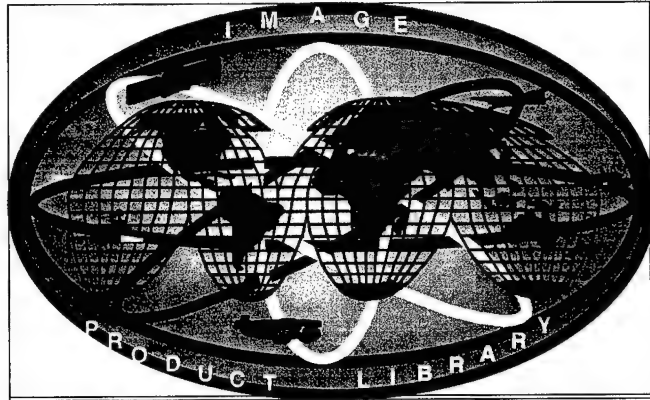


*Eddie Smith, Engineering Support*

## IMAGE PRODUCT LIBRARY (IPL)

### ROLE:

- Installation
- Customer Support
- Hardware Engineering
- System Acquisition
- System Assembly, Configuration, Integration, Installation
- Logistics Support
- Training
- Configuration Management
- Life Cycle Support



The Image Product Library (IPL) Program is a National Imagery and Mapping Agency (NIMA) sponsored effort to develop the standard United States Imagery and Geospatial Systems (USIGS) product archive system. This system was part of the NIMA's Pilot Accelerated Architecture Acquisition Initiative (A<sup>3</sup>I) for enhanced digital imagery request, distribution, and management for all echelons within the National and DoD Imagery/Intelligence community. The objective of the Pilot A<sup>3</sup>I was to quickly transition enhanced capabilities to the field forming the basis for the USIGS architecture. The DoD Intelligence Information System Management Board certified the newest baseline of the software, IPL version 2.1 to field on 23 November 1999. A new release, IPL version 2.5 is currently undergoing testing in preparation for fielding in early FY01.

The IPL provides the capability to supply image products to intelligence analyst users and non-intelligence users from assets at selected imagery intelligence (IMINT) production centers. IPL provides browser capability to query image product holdings at IMINT production centers and/or other IPLs to determine what image products are available to satisfy the user's needs. Users select an image product; indicate transfer parameters, which influence image product format and compression ratio; and request transfer of the product. The IPL browser workstation then receives the image product and notifies the user that the image product is available. The IPL also provides the capability to receive image products in



*Vivian Di Cristofaro, Head, National Imagery & Mapping Agency Support Office*



*Frank Greco, Deputy and Installation Team Lead*

National Imagery Transmission Format (NITF), Tape Format Requirement Documents (TFRD) format, or selected additional commercial formats and enter them in the Image Product Database. The IPL Manager has functions available for database maintenance and management.

Sources of imagery include National, Theater, Tactical, and Commercial assets that support producer and war fighter needs at all required levels. IPL provides worldwide, imagery dissemination within the USIGS Archive and Dissemination Element of the NIMA Libraries. IPL will become the Image Analyst's primary tool for supporting the storage and dissemination of imagery and imagery-based products worldwide. IPL provides the imagery community with improved accessibility, operational support, and distribution of geospatial and imagery products. To achieve this mission, IPL provides an automated capability to support the following activities:

- Query image product holdings from multiple sources,
- Receive imagery and/or image products from multiple sources,
- Maintain a database of imagery and/or image products,
- Transfer imagery and/or image products to imagery clients from imagery sources,
- Transfer imagery to remote locations using several formats and compression ratios.

IPL provides the server software necessary to implement the IPL mission, supports client searches/requests for applicable imagery and image products, and provides information on the status of request/transfers. IPL interfaces with other imagery sources (IESS, 5D, etc.) to enable the client to conduct queries of imagery holdings and requests, and receive the imagery.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia's involvement in the IPL program began in 1997 with our initial funding from the NIMA program office. During FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia received continued tasking to execute the efforts necessary to initiate and maintain IPL in the field.



*Peter Di Pasquale  
Logistics Support Team Lead*



*Robert Mullen, Engineering Team Lead*



*Joel Cohen, Engineering Support*

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided Site Introduction Teams to install the IPL software and hardware at sites located in both CONUS and abroad. These teams performed site surveys, delivered and installed IPL software on site equipment, configured site systems to support specialized end user requirements, and migrated site imagery databases to the IPL environment. Site Introduction Teams also provided hardware installation support at numerous operational sites where they installed IPL hardware procured through SSC San Diego C<sup>4</sup>I Programs Office Philadelphia and integrated it into the existing site network architecture. Site Introduction Teams also provided on-the-job training for IPL operators, delivered supporting documentation required by the site for IPL use/support, reported observed IPL and/or site problems and discrepancies, and reproduced deliverable software from master electronic media. In addition, the teams provided technical support to sites and the help desk, supported site security certification, and provided shipboard installation planning and coordination. During FY00, the Site Introduction Teams performed 35 IPL on-site system software installations and 51 hardware installations. The teams also performed site acceptance testing, training, and technical support.

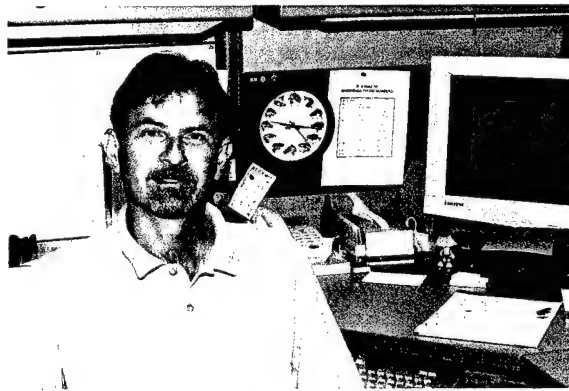
Our Hardware Engineering Team provided hardware engineering support to the IPL program in FY00. This endeavor included hardware definition, requirements definition, installation guidance package planning, site checks, and system installation parameter definition. With the support of our resource management personnel, this team provided procurement support to NIMA for the acquisition of hardware and COTS software and licenses for the IPL program. This effort incorporated the tasks necessary to cost, purchase, track, and warehouse the Non Development Item (NDI) system components identified by the IPL program. The team performed hardware assembly, configuration, and integration; system and program software installation; software/hardware integration; IPL system testing prior to field introduction; and equipment receipt, inventory, storage, shipment packaging, and shipping.

During FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia procured 71 complete IPL systems in either a medium configuration (Sun 4500) or a small configuration (Sun E450). We placed a total of 321 procurement actions in support of IPL programs. During the year, we also assembled, configured, integrated, shipped, and installed 51 systems. Fourteen of the installations were performed on Navy vessels and 37 at land-based sites supporting Common Imagery Ground Station Surface (CIGSS) and Joint Task Force (JTF) tasking.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided Logistics Support for IPL including documentation generation and assessment (logistics planning, training, certification, testing, user



*Lou Di Girolamo, Engineering Support*



*Norbert Reis, Engineering Support*

documents), and sparing assessment for hardware acquisitions. The Logistics Team also supported system configuration management and tracking by providing hardware and software status accounting of user sites, and inventorying and tracking IPL hardware acquisitions in the CM database.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided interim support for IPL elements that are not covered by extended warranty or service agreement and set up and maintained our interim depot, failure tracking and analysis, and hardware technical support for this effort. To support all deployed IPL systems worldwide, we had previously established a program-wide IPL spares depot at FedEx, Memphis, Tennessee.

SSC San Diego C<sup>4</sup>I Programs Office Philadelphia continued to support our established IPL spares depot at FedEx, which was developed in conjunction with the JSIPS-N program depot to provide integrated JSIPS-N/IPL Navy Logistics support. We developed the Navy's spares and documentation requirements for shipboard systems, and we purchased and delivered the pack-up kits to the ships in support of the PMA-281 ILS certification program. During FY00, 16 shipboard pack-up kits and documentation sets were delivered in support of the Navy's ILS Certification Program.

During FY00, SSC San Diego C<sup>4</sup>I Programs Office Philadelphia provided IPL technical support and Customer Support Services for the IPL systems. Our Customer Support Team maintained a toll free international access number for customer support; logged and tracked all requests for support; submitted formal trouble reports, as required; provided 24-hour 7-day per week support to troubleshoot and resolve technical problems; monitored results and ensured that problems were accurately tracked to resolution; and analyzed the nature of problems and reported trends.

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*Robert Flipse, Installation Support*



*Mike Finlay, Installation Support*



*Robert Overholt, Installation Support*



## GLOSSARY OF ACRONYMS

A <sup>3</sup> I	Accelerated Architecture Acquisition Initiative
AGF	Command Ship
AIS	Automated Information Systems
AOSD	APS Operations Support Detachment
AOSD LANT	Afloat Operational Support Detachment, Atlantic
AOSD PAC	Afloat Operational Support Detachment, Pacific
APPS	Analytical Photogrammetric Positioning System
APS	Afloat Planning System
APS/RDS	Afloat Planning System/Rapid Deployment Suite
ATACS	Advanced Tactical Air Command System
ATM	Asynchronous Transfer Mode
BESEP	Basic Electronic System Engineering Plan
BF	Battle Force
BG	Battle Group
BPA	Basic Purchasing Agreement
C <sup>4</sup> I	Command, Control, Communications, Computers, and Intelligence
CASREP	Casualty Report
CBT	Computer Based Training
CD-ROM	Compact Disk Read Only Memory
CFA	Cognizant Field Activity
CG	Cruiser
CGS	Common Ground Station
CHBDL	Common High Bandwidth Data Link
CIGSS	Common Imagery Ground Station Surface
CINCLANTFLT	Commander In Chief, Atlantic Fleet
CINCPACFLT	Commander In Chief, Pacific Fleet
CM	Configuration Management
CMSA	Cruise Missile Support Activity
CMSALANT	Cruise Missile Support Activity, Atlantic
CMSAPAC	Cruise Missile Support Activity, Pacific
CMSAUK	Cruise Missile Support Activity, United Kingdom
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COMFIFTHFLT	Commander, U.S. Fifth Fleet
COMNAVAIRLANT	Commander, Naval Air Force, Atlantic Fleet
CONUS	Continental United States
COR	Contracting Officer's Representative
COTS	Commercial Off-the-Shelf
COTS NDI	Commercial Off-the-Shelf Non Development Item
CPU	Computer Processing Unit
CSPAT	Combat System Pre-Acceptance Test
CSRA	Combat Systems Readiness Assessment
CV	Aircraft Carrier
CVIC	Aircraft Carrier Intelligence Center
CVN	Aircraft Carrier Nuclear
DAPS	Defense Automated Printing services
DBA	Data Base Administrator

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DCRS	Digital Camera Receiving Station
DIA	Defense Intelligence Agency
DISC	Defense Industrial Support Center
DIWS	Digital Imagery Work Station
DLA	Defense Logistics Agency
DMISA	Depot Maintenance Inter-Service Agreement
DoD	Department of Defense
DPL	Digital Photo Lab
ECP	Engineering Change Proposal
ECU	Environmental Control Unit
EDM	Engineering Development Model
ESC	Electronic Systems Command
ESIS	Enhanced Sensitive Compartmented Information (SCI) Isolation Segment
ETEP	Electronic Tomahawk Employment Planning Package
ETM	Equipment Technical Manual
FBE	Fleet Battlelab Experiment
FedEx	Federal Express
FISC	Fleet and Industrial Supply Center
FIT	Fleet Installation Team
FLTIMAGCOMPAC	Fleet Imaging Command Pacific
FMS	Foreign Military Sales
FPM	Flight Performance Module
FTI	Fast Tactical Imagery
FY	Fiscal Year
GCCS-M	Global Command and Control System – Maritime
GENSER	General Service
HHDCRS	Hand Held Digital Camera Receiving System
HMMWV	Highly Mobile Multiple Wheeled Vehicle
ICD	Installation Control Drawings
IDIQ	Indefinite Delivery / Indefinite Quantity
IDS	Intrusion Detection System
IESS	Imagery Exploitation Support System
ILS	Integrated Logistics Support
IMINT	Imagery Intelligence
IMPAC	International Merchant Purchase Authorization Card
IOC	Initial Operational Capability
IPA	Image Product Archive
IPL	Image Product Library
IPR	In-Progress Review
IPT	Integrated Process Team
ISEA	In-Service Engineering Agency
ISNS	Integrated Shipboard Network Systems
IT-21	Information Technology for the 21 <sup>st</sup> Century
JCA	JSIPS-N Concentrator Architecture
JMPS	Joint Mission Planning System
JOTS	Joint Operational Tactical System
JSIPS-N	Joint Service Imagery Processing System – Navy

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JTF	Joint Task Force
JWICS	Joint Worldwide Intelligence Communications Systems
LAN	Local Area Network
LANTIRN-FLIR	Low Altitude Navigation and Targeting Infrared for Night System-Forward Looking Infrared Imager
LCC	Amphibious Command Ship
LCM	Life Cycle Manager
LHA/LHD	Amphibious Assault Ships
LPMP	Launch Platform Mission Planning
LSL	Logistics Support Library
LST	Logistics Support Terminal
MDS	Mission Distribution System
METOC	Meteorological/Oceanographic
MILSPEC	Military Specification
MILSTRIP	Military Standard Requisition and Issue Procedures
MOA	Memorandum of Agreement
MPLAN	Mission Planning LAN
MPS	Mission Planning System
MTF	Message Text Format
NAVAIR	Naval Air Systems Command
NAVICP	Naval Inventory Control Point
NavMPS	Naval Mission Planning System
NAVSEA	Naval Sea Systems Command
NAWC-AD	Naval Air Warfare Center – Aircraft Division
NCTSI	Navy Center for Tactical Systems Interoperability
NDI	Non-Development Item
NELO	Naval Electronic Logistics Office
NIMA	National Imagery and Mapping Agency
NIS	National Input Segment
NIS (DE)	National Input Segment, Dissemination Element
NITF	National Imagery Transmission Format
NMITC	Navy and Marine Corps Intelligence Training Center
N-PFPS	Navy Portable Flight Planning Software
NRNASC	Naval Reserve Air System Command
NSAWC	Naval Strike and Air Warfare Center
NSA	Naval Support Activity
NSAP	NSA Philadelphia
NSTS	NAVSEA Technical Specification
NSWC	Naval Surface Warfare Center
NSWPC	Naval Strike Warfare Planning Center
OBRP	On Board Repair Part
ODIN	Organic Digital Imagery Now
OJT	On-the-Job Training
OLPST	On-Line Performance Support Tools
ONI	Office of Naval Intelligence
OT	Operational Test
P-DCRS	Portable Digital Camera Receiving Station
PDF	Portable Document Format
PEO(T)	Program Executive Officer for Tactical Aircraft

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PEO(W)	Program Executive Officer Strike Weapons and Unmanned Aviation Project
PFPS	Portable Flight Planning Software
PGW	Precision Guided Weapons
PIF	Prototype Integration Facility
PKI	Public Key Infrastructure
PMA	Program Manager for Aircraft
PMR	Program Management Review
PO	Program Office
PPDB	Point Positioning Data Base
PPL	Preferred Products List
PTW	Precision Targeting Workstation
RAID	Redundant Array of Independent Disks
RDS	Rapid Deployment Suite
REDS	Real-time Execution Decision Support
SA	System Administrator
SAP	Special Access Program
SAT	System Acceptance Testing
SCIF	Sensitive Compartmented Information Facility
SDX	Secure Data Transfer
SHIPALT	Ship Alteration
SID	Ships Installation Drawing
SIPRNET	Secure Internet Protocol Router Network
SITF	Strike Interface Test Facility
SPAWAR	Space and Naval Warfare
SSC	SPAWAR Systems Center
SWATSLANT	Strike Warfare and Tactics School. Atlantic
TAMPS	Tactical Automated Mission Planning System
TARPS	Tactical Air Reconnaissance Pod System
TARPS (DI)	Tactical Air Reconnaissance Pod System (Digital Imagery)
TES	Tactical Exploitation System
TFRD	Tape Format Requirement Documents
TIS	Tactical Input Segment
TLAM	Tomahawk Land Attack Missile
TMPC	Theater Mission Planning Center
TMPS	Tactical Mission Planning System
TOA	Total Obligating Authority
TPS	TOMAHAWK Mission Planning System
TPS-A	TLAM Planning System Afloat
TQM	Total Quality Management
TSCM	Tomahawk Strike Coordination Module
TTIS	Transit Case Tactical Input Segment
ULSS	User Logistic Support Summary
UPS	Uninterruptible Power Supply
USAF	United States Air Force
USIGS	United States Imagery and Geospatial System
USMC	United States Marine Corps
USN	United States Navy
WPC	Washington Planning Center
Y2K	Year 2000

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